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# Offender Population Forecasts

FY 2003 to FY 2012



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**Secretary of Public Safety**

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## **Report Summary**

### ***Authority for this Report***

This report responds to Item 401, Chapter 899, 2002 Act of Assembly (Appropriations Act) which requires the Secretary of Public Safety to "...present revised state and local juvenile and state and local responsibility adult offender population forecasts to the Governor, the Chairmen of the House Appropriations and Senate Finance Committees, and the Chairmen of the House and Senate Courts of Justice Committees by October 15, 2002, for each fiscal year through FY 2007 and by October 15, 2003, for each fiscal year through FY 2008."

### ***Purpose***

This report documents the annual forecasting process for Virginia's adult and juvenile offender populations. Forecasts of confined correctional populations provide information for budgeting and planning of various criminal justice capital and operational expenditures, and provide data for assessing the needs for any policy changes. The accuracy of these forecasts can affect the success of planning and resource allocation. Overprojection generally results in needless appropriation of resources to criminal justice institutions, while underprojection can compromise the correctional system's ability to adequately ensure public safety.

### ***Summary of Methodology***

Since the late 1980s, the Secretary of Public Safety has annually overseen a process that forecasts the number of adult and juvenile offenders for whom either the State or the localities have responsibility. The forecasting process uses two committees to produce the official forecast: a Technical Advisory Committee that uses statistical methods (time series and/or simulation models) to make projections, and a Policy Advisory Committee that reviews the projections and selects a forecast for each population to recommend to the Secretary. The Policy Advisory Committee also considers the effects of any recent trend shifts, and newly adopted legislation on the forecast, making adjustments as it deems appropriate.

### ***Summary of Each Forecast***

#### **State Responsible New Commitment Forecast**

There was an increase in the number of state responsible (SR) new court commitments from 9,183 to 9,995 or 8.8% from calendar year (CY) 2000 to CY 2001. The adopted forecast has an expected new commitment growth of 250 or 2.5% from 9,995 to 10,245 from CY 2001 to CY 2002. The number of new commitments for CY 2007 is 11,877. The average annual change from CY 2002 to CY 2007 is an increase of 314 offenders or 2.9%. It is assumed that the sentence group composition for future annual admissions will be the same as that for admissions in CY 2001. This forecast is based on a combination of several time series ARIMA models produced by the Department of Corrections (DOC) and the Department of Planning and Budget (DPB). The final statistical new commitment forecast was increased by the Policy Advisory Committee by 186 in CY 2002, the first year of the forecast.

## **State Responsible Population Forecast**

The state responsible adult offender population is expected to increase from 34,918 in June 2002 to 36,310 in June 2003, a growth of 1,392 or 4.0%. The population is expected to grow from 36,310 in June 2003 to 40,990 in June 2008, a growth of 4,680 or a 2.7% average yearly increase. The average percent change of 2.5% from FY 2004 to FY 2008 is used to extrapolate the forecast from FY 2009 to FY 2012. The final state responsible population forecast is an average of the DPB ARIMA model and DOC simulation model forecasts. No other numerical adjustments or add-ons were made to the population forecast.

## **Local Responsible Population Forecast**

The local responsible (LR) average daily jail offender population is expected to increase from 16,214 in June 2002 to 17,093 in FY 2003, a growth of 879 or 5.4%. The population is expected to grow from 17,093 in FY 2003 to 20,655 in FY 2008, a 3.8% average yearly increase. No numerical adjustments were made to the statistical forecast. Beginning in FY 2001, local jail offender populations were calculated based on average daily population (ADP). The use of ADP is considered more accurate than the previously used Tuesday Report method.

## **State Responsible Juvenile Admissions Forecast**

Total state responsible juvenile admissions decreased from 1,241 in June 2001 to 1,220 in June 2002, a decrease of 21 (1.69%). Juvenile admissions are forecasted to increase to 1,312 by June of 2003, an increase of 92 juveniles, or 7.54%. From FY 2004 to FY 2008 the annual admissions are flat at 1,308. This year the juvenile admissions forecast was numerically adjusted by the Policy Advisory Committee. The need for an adjustment was determined in response to significant budget cuts in Department of Juvenile Justice (DJJ) community programs. DJJ and the Policy Advisory Committee believe that juvenile correctional center admissions will most likely increase relative to the trend that would have been anticipated before the program reductions. Details on the numerical adjustments are presented in Section VI. Virginia's State Responsible Juvenile Offender Population, subsection *FY 2003 Juvenile Admissions and Population Forecast*.

## **State Responsible Juvenile Population Forecast**

The state responsible juvenile offender population increased from 1,206 in June 2001 to 1,208 by June 2002, a growth of 2 or 0.17%. It is expected to increase from 1,208 to 1,293 from June 2002 to June 2003, a growth of 85 or just over 7%. The SR juvenile population is then expected to grow from 1,293 in June 2003 to 1,400 in June 2008, an increase of 107. The average annual forecasted growth from FY 2004 to FY 2008 is 1.62%. This forecast is based on a simulation model designed by the Department of Juvenile Justice that explicitly models the Department's length of stay system.

## **Juvenile Detention Home Forecast**

The detention home population increased from 1,110 in June 2001 to 1,187 by June 2002, an increase of 77, or 6.9%. It is expected to increase to 1,195 by June 2003, an increase of 8, or 0.7%. The detention home population is forecasted to grow from 1,195 in June 2003 to 1,233 in June 2008. This represents a very modest average increase of less than 1% per year. There were no numerical adjustments made to the forecast. The forecasted growth trend reflects an expectation for only marginal changes in detention eligible intake complaints.

## I. Overview of the Virginia Forecasting Process

Annually, the Secretary of Public Safety oversees the development of adult and juvenile offender population forecasts. These forecasts are essential to estimating future capital needs and operating expenses for prisons, jails and juvenile correctional centers. A report prepared by the Fiscal Analysis Section of the Joint Legislative Audit and Review Commission (JLARC) provides an excellent overview of the forecasting process as it relates to the state budget process.<sup>1</sup>

The forecasting process uses two Committees to produce the official forecast: the Policy Advisory Committee and the Technical Advisory Committee. Barry R. Green, Deputy Secretary of Public Safety, chaired the fiscal year (FY) 2003 Policy Advisory Committee. The Policy Advisory Committee tempers statistical projections with policy-based issues. Members of the Policy Advisory Committee include representatives from Virginia's executive, legislative and judicial branches, and local and state law enforcement (see Appendix D). These individuals understand or are involved in the criminal justice process, but are not necessarily statisticians or responsible for incarcerated populations. The diverse backgrounds and experiences of Policy Advisory Committee members promote broad discussions of numerous issues in criminal justice. It is the responsibility of the Policy Advisory Committee to discuss issues that they feel may affect incarcerated populations in the future. They are not hindered by the necessity to anchor their assumptions on past trends and are free to consider and explore all possible outcomes. Policy Advisory Committee discussions in 2002 included such subjects as:

- Overview of Policy Advisory Committee Role

- Overview of Technical Advisory Committee Role

- Review of Last Year's Forecast - Accuracy Report and Update

- National Crime Trends and Arrest/Crime Rates in Virginia

- Overview of 2002 General Assembly Actions Which May Impact Forecasts

- Overview of Time Series Forecasting Techniques

- Parole Release Information

William M. Shobe, Ph.D., Associate Director, Economic and Regulatory Analysis for the Department of Planning and Budget, chaired the FY 2003 Technical Advisory Committee. This Committee is comprised of technical experts from the Compensation Board, Department of Corrections, Department of Criminal Justice Services, Department of Juvenile Justice, Department of Planning and Budget, Joint Legislative Audit and Review Commission, Virginia Criminal Sentencing Commission, and Virginia State Police (see Appendix E).

The Technical Advisory Committee uses statistical methods to make projections. Although statistical forecasts cannot predict the future with absolute precision, a technically accurate forecast reduces short-term (1 to 2 years) uncertainty. Virginia's biennial forecasts have been reasonably accurate while long-term forecasts face greater uncertainty. Historical forecast accuracy for June 2002 is presented in Section X of this report.

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<sup>1</sup> Technical Status Report Title: An Overview of Expenditure Forecasting in Four Major State Programs, Final Report, dated August, 2000 (House Document 3).

## **II. Forecasting Methodology**

The Technical Advisory Committee meets monthly throughout the year and as often as needed during the forecast season from June through September. It consists of persons in various state agencies that have expertise in statistical and quantitative methods. Predominantly, they use time series analyses and/or simulation modeling to project future offender populations. The Committee focuses largely on identifying trends and seasonal patterns in Virginia's criminal justice admissions and incarceration databases to estimate how observed trends and seasonal patterns may affect the forecasts. Separate computer models were built for state responsible offender populations, local responsible jail populations, and juvenile correctional center populations.

The Department of Corrections (DOC) has direct responsibility for forecasting prison populations. The Department of Criminal Justice Services (DCJS) has direct responsibility for forecasting local responsible jail populations. The Department of Juvenile Justice (DJJ) has direct responsibility for forecasting juvenile correctional center populations, local detention populations and detention home forecasts. To ensure that the Committee had at least two forecasts of each population to choose from, the Department of Planning and Budget also provides a forecast for each of the four populations. Additionally, any member of the Technical Advisory Committee may present a forecast for any or all of the three populations for consideration by the full Technical Advisory Committee. New methods and approaches are strongly encouraged to take full advantage of recent advances in criminal justice research and forecasting techniques, as well as to have the advantage of comparing forecasts that used different approaches.

The Technical Advisory Committee has a Methods Sub-Committee that conducts peer reviews of all forecasts before the full Technical Advisory Committee meets to consider the forecasts. Using strict pre-determined criteria for acceptance, the Methods Sub-Committee closely scrutinizes the methods used to produce each forecast and the resultant diagnostic statistics. The sub-committee's purpose is to determine the statistical validity of each forecast, rather than recommending which forecast should be chosen.

Once validated, each forecast is then presented to the full Technical Advisory Committee. Each forecaster is responsible for presenting and defending the forecast offered to the Committee for consideration. The full Technical Advisory Committee then selects the forecast that has the best in sample and out of sample fit statistics and the best model statistics to recommend to the Policy Advisory Committee.

### ***Multiple Methods Approach***

Several different forecasting methods, techniques, and approaches were used by the Technical Advisory Committee to arrive at a final projection of offender populations. No single method is perfect; no one method can guarantee the right answer to a particular question. However, if unique methods, each with different strengths, provide similar answers, then greater confidence can be placed in the validity of one's conclusions. The impetus for using multiple methods in research grew with the recognition, born out of experience, that in practice even the supposedly "ideal" methods had their shortcomings. This multiple methods approach to forecasting necessarily consumes large amounts of resources. The potential benefits, however, greatly exceed the costs. The concept of multiple methods is well accepted in the social sciences, and the advantages of using more than one method are a settled issue in research literature.

However, the multi-methodological approach is not without its limits. Of most concern is the possibility that the methods may be biased in the same directions. Other minor limitations to this approach have been discussed in recent literature. However, there is general agreement that proper planning and selection of methods can minimize these limitations.

There are times when no single forecast stands out as clearly superior to the others. Yet, a choice must eventually be made and a single estimate agreed upon for planning purposes. This is often accomplished by combining or averaging competing forecasts that the Technical Advisory Committee feel have equal likelihood of being correct. This is used as a technique for improving accuracy rather than a decision-making tool. The improved accuracy that can be obtained from combining forecasts has been well documented in a body of literature that stretches back over thirty years. The essence of this research is that combined forecasts are generally more accurate than single forecasts and are consistently more accurate over a broader range of circumstances. Most of this accuracy is achieved through the combination of two or three forecasts: beyond that amount, additional forecasts will rarely improve accuracy.

### ***Qualitative or Judgmental Input***

After selecting “optimal” baseline forecasts, the Technical Advisory Committee constructs alternative, albeit statistically less likely, forecasts to provide the Policy Advisory Committee with the information they need to consider all probable outcomes. This provides insight into the level of uncertainty surrounding population projections. The Policy Advisory Committee evaluates and adjusts the subjective probabilities associated with alternative forecasts based upon their experience and expectations. This is a critical point in the forecast process, since the quantitative methods used to produce baseline forecasts largely model previous trends and patterns. The Technical Advisory Committee is generally limited in its ability to estimate the effect of innovative policies and unique changes in criminal behavioral patterns that are not reflected in the historical data. Based upon input from members of the Policy Advisory Committee, models are re-specified and final baseline forecasts are produced.

If there are any new policy initiatives that will likely increase or decrease confined populations, the Technical Advisory Committee develops statistical estimates of the anticipated impact for each year of the forecast period. The estimates are presented to the Policy Advisory Committee for approval. Once approved, baseline forecasts are adjusted to include any anticipated new policy impact.

Final forecasts (baseline and adjustments) are presented and discussed during the last Policy Advisory Committee meeting of each year. The forecasts benefit from rigorous quantitative analysis by the Technical Advisory Committee and qualitative scrutiny by the Policy Advisory Committee (a consensus process). Blending quantitative and qualitative analyses is largely responsible for the success of the consensus process. Using multiple methods to estimate the future forecasts improves validity and accuracy. Each technique has its strengths and weaknesses. Merging the two approaches offsets many of these weaknesses and compounds their strengths.

## **III. General Factors Affecting Virginia’s Offender Populations**

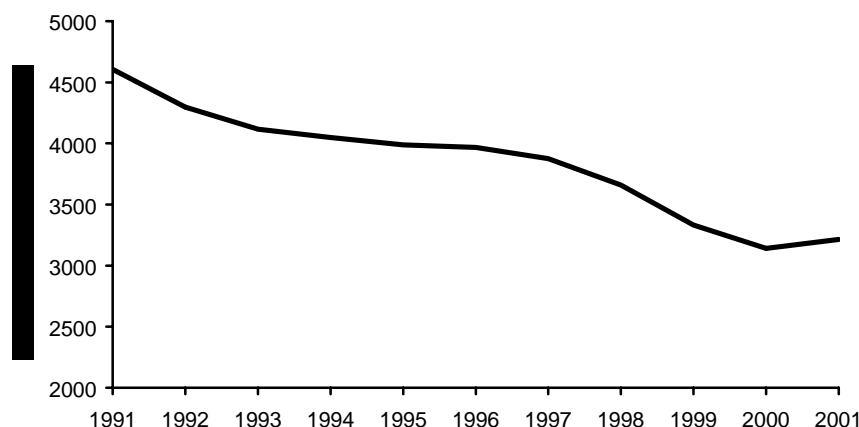
The Technical Advisory Committee reviewed various statistical sources to identify and analyze trends in Virginia’s criminal justice data. These statistics are valuable for understanding and explaining Virginia’s historical offender populations and are used in the development of the projected populations.

## Crime and Arrest Trends

Virginia crime and arrest trends influence offender populations because crimes lead to arrests, and arrest is the 'entry point' for many who become part of the offender population. Although the precise relationship between changes in crime and arrest rates and changes in offender populations is unclear, these trends do provide one indicator of potential future offender population trends<sup>2</sup>.

*Figure 1* depicts Virginia's index crime rate (murder, non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft) for CY 1991 through 2001. The trend most relevant to future offender populations is that Virginia's crime rate increased by 2.3% from 2000 to 2001. This was the first increase in the crime rate in at least a decade, and followed a long period of steadily declining crime rates. Virginia's first-in-a-decade crime rate increase mirrored a similar, but smaller, increase in the 2001 national crime rate.

**Figure 1: Virginia Index Crime Rates CY 1991 - 2001**

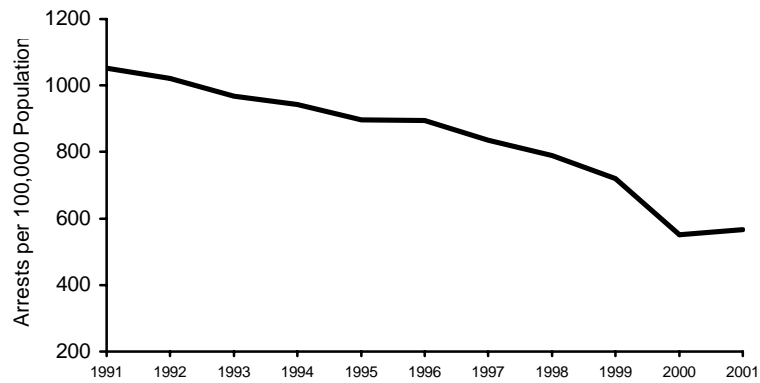


Increases in the overall index crime rate for 2001 were reflected in increases in rates for most individual types of crimes. The violent crime rate increased by 3.6% in 2001, due to increases in rates for forcible rape, robbery and aggravated assault. Murder was the only violent crime that decreased in 2001. The property crime rate increased by 2.2% in 2001, due to increases in rates for burglary and larceny. Motor vehicle theft was the only property crime that decreased in 2001.

*Figure 2* depicts Virginia's index crime arrest rate for CY 1991 through 2001. As was the case with crime rates, Virginia's arrest rate increased in 2001 for the first time following a decade of decreases. Overall, Virginia's arrest rate increased by 2.6% from 2000 to 2001. Arrest rates for violent crime increased by 4.2% from 2000 to 2001, due to increases in arrests for all types of violent crime – murder, forcible rape, robbery and aggravated assault. Arrest rates for property crimes increased by 2.1% in 2001, due to increases in arrests for burglary and larceny. As was the case with the crime rate, motor vehicle theft was the only property crime that decreased in 2001.

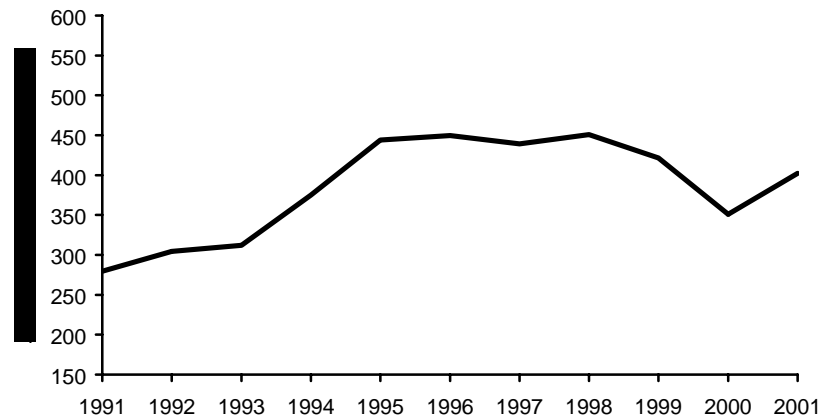
<sup>2</sup> Crime and arrest data are from Virginia State Police, Uniform Crime Reporting Section. 1999-2001 data are adjusted by DCJS Criminal Justice Research Center for underreporting by some localities during transition from UCR to Incident Based Reporting System (IBR). All data used are converted to UCR format.

**Figure 2: Virginia Index Crime Arrest Rates CY 1991 – 2001**



*Figure 3 depicts Virginia's drug crime arrest rates for CY 1991 through 2001. Drug arrests are not included in the index crime arrest rates shown in Figure 2. However, drug arrest trends are presented here because drug offenders are a major component of Virginia's offender populations. Overall, the drug arrest rate increased by 15% from 2000 to 2001. However, unlike index crime arrests, rates for drug arrests increased throughout most of the 1990s, with major reductions only in 1999 and 2000. In 2001, arrest rates increased for all four of the major categories of drug arrests (possession of schedule I/II drugs, sale of schedule I/II drugs, possession of marijuana, and sale of marijuana).*

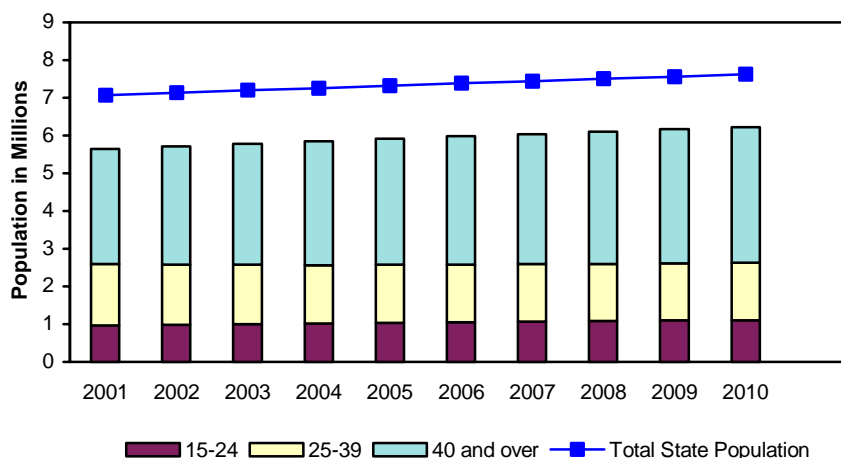
**Figure 3: Virginia Drug Crime Arrest Rates CY 1991 – 2001**



At this point, it is not known whether the CY 2001 increases in Virginia crime and arrest rates seen in *Figures 1, 2 and 3* will continue in future years. It is possible that the increases seen in 2001 are simply upward “blips” in what will be a continuing decline in crimes and arrests. It is also possible that crime and arrest rates will level off at or near the higher rates seen in 2001. Finally it is possible that the increases seen in 2001 are the beginnings of a trend of increasing crime and arrest rates. Each of these possibilities may have different effects on future offender populations. Careful monitoring of changes in crime and arrest rates for 2002 and 2003 may indicate which of these possible trends is most likely to occur. Preliminary crime and arrest report data for January through May of CY 2002 indicates that the number of crimes and arrests reported in 2002 is slightly below the levels reported for the same period in CY 2001. This preliminary data suggests that Virginia is not entering a period of continued increases in crime and arrest rates.

## Demographic Trends

**Figure 4: Virginia Population's Projected Age Distribution CY 2001- 2010**



Another factor that is likely to have an impact on the number of offenders is the “graying” of Virginia’s population. From 1990 to 2000, the number of Virginia residents between the ages of 25 and 39 years old declined by roughly 0.3% per year. *Figure 4* shows Virginia’s projected population by age groups.<sup>3</sup> Between 2001 and 2005 the 25 to 39 age group is projected to decline 6% and a further decline of 0.2% between 2006 and 2010. This decline in the number of 25 to

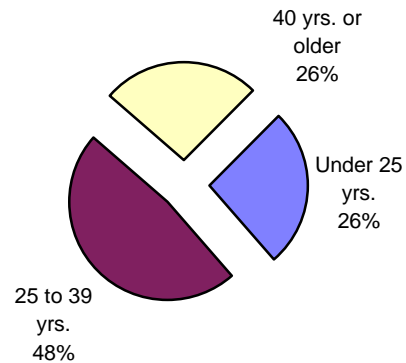
<sup>3</sup> Population data source: U.S. Census Bureau, State Population Projections, Series A.

39 year olds is likely to exert some downward influence over admissions to adult offender facilities. However, the crime prone age group (15 to 24) will increase 14% between 2001 and 2010, with most of that growth (8%) occurring between 2001 and 2005.

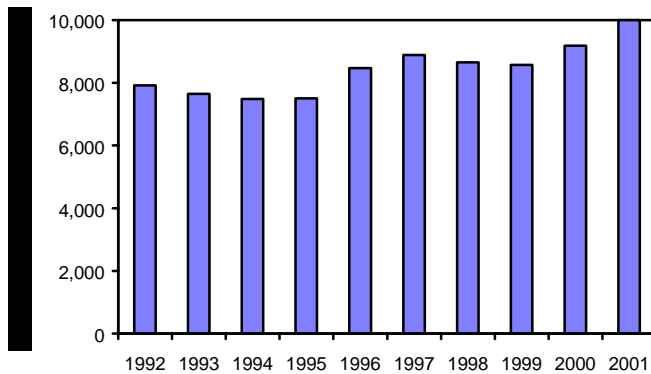
### ***Effects of Crime Trends and Demographics on Adult Offender Populations***

As depicted in *Figure 5* individuals aged 25 to 39 comprise almost 48% of new commitments to state facilities. Consequently, any reduction in the overall number of individuals in this age group is likely to place some downward pressure on new commitments to state facilities. However, projected population increases for the crime prone age group may offset any reduction in commitments for age group 25 to 39. As one might expect, changes

**Figure 5: Age Distribution for State Responsible New Prison Commitments CY 2001**



**Figure 6: New Commitments to State Facilities CY 1992-2001**



in the flow of adult offenders entering state facilities are related to the changes in the number of total arrests discussed above. This effect is not instantaneous, since there is a significant lag between an offender's arrest and, if convicted, subsequent commitment to a state responsible facility. *Figure 6* shows that, after

rising in 1992, new offender commitments to state facilities declined 5% from 1992 to 1995. This trend reversed in 1996, however, when commitments to state facilities abruptly increased by 13% and then another 5% in 1997. Commitments to state facilities in 2000 were 7.2% higher than in 1999. New commitments continued to increase in 2001 with an 8.8% growth over 2000.

Figure 7 shows that the total state responsible population (in prison and jails) has increased each year since FY 1993. The state responsible offender population has increased by 68%, from 20,760 in FY 1993 to 34,918 at the end of FY 2002. This represents an increase of 14,158 offenders and an annual growth rate of 1,573 offenders or 6% per year. This growth can be attributed to increases in new court commitments to the system and fewer discretionary releases due to declining parole grant rates. With truth-in-sentencing, more “new” law offenders (those whose date of offense is on or after January 1, 1995) are being held in prison with longer sentences. This, along with longer lengths of stay, contributes to a “stacking effect” in correctional facilities.

**Figure 7: June State Responsible Inmate Population FY 1993-2002**

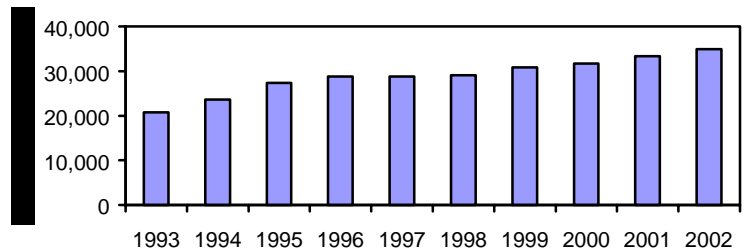
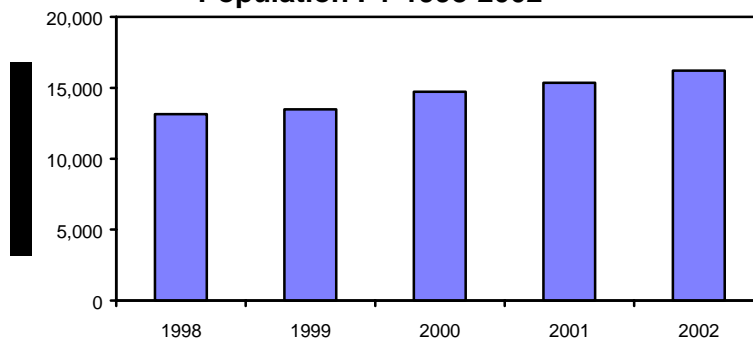


Figure 8 shows the June local responsible historical average daily jail population (ADP) for FY 1998 to FY 2002. Beginning with the 2001 forecast report, jail populations are calculated based on ADP rather than the previous method of using the Tuesday Report. Adding the number of offenders reported in jails on each day of the month, then dividing by the number of days in the month, calculates the ADP. This measure is considered more accurate than the previously used Tuesday Report method, which produced a monthly count based on only two Tuesdays of the month. ADP is based on data from the Local Inmate Data System (LIDS), maintained by the Compensation Board. Although LIDS data provides more detail than the former Tuesday report,

**Figure 8: June Local Responsible Jail ADP Population FY 1998-2002**



it did not begin until 1997, and therefore historical ADP data is available only back to FY 1998. Although the LIDS database was not developed for use as a forecasting database, it is the main source for local responsible offender population information. Figure 8 shows that average daily local responsible jail population grew from 13,141 offenders in FY 1998 to

16,214 in FY 2002, an increase of 23%. One possible explanation for the increase in the local responsible population is that, beginning September 1998, responsibility for housing felons with a sentence of "12 months" was shifted from state facilities to local jails. Another possible explanation for the increase in the local responsible population during FY 1998 and FY 2002 is the impact of Bail Bond Reform legislation. Additional work with the LIDS data is needed to determine how to quantify the effect of this legislation on the local jail populations.

Although the local responsible jail population increased annually since FY 1998, programs that provide alternatives to incarceration may have moderated this increase. The Department of Criminal Justice Services funds two programs that provide alternatives to incarceration for local responsible offenders. These programs are authorized under the Pretrial Services Act and the Comprehensive Community Corrections Act. From FY 1998 to FY 2001, these two programs

received 130,187 placements<sup>4</sup> that contributed to reductions in the awaiting trial jail population or sentenced jail populations. Pretrial services programs expedite bail for unsentenced awaiting trial offenders. During this period, magistrates and judges released a total of 45,552 defendants to pretrial supervision, and sentenced 118,029 offenders to community-based probation programs.

### ***Additional Factors Contributing to Offender Population Increases***

In addition to the crime, arrest, and demographic trends discussed earlier in this section, the Technical Advisory Committee identified several other factors that help explain the increase in offender populations. Among the factors identified were:

#### **Technical probation and parole violators not included in arrest statistics**

Even though arrest statistics for FY 2000 to FY 2001 appear to have increased, there are additional prison and jail admissions without corresponding arrests. There are various ways in which persons may be admitted to jail or prison without an arrest being included in state arrest statistics. For example:

- Probationers who violate the conditions of their probation without committing a new crime (technical violators) may be admitted to jail and eventually to prison, but are not counted in state arrest statistics. Between June of 1990 and 2000, the DOC probation population increased from 20,448 to 39,138 or by 91%. Furthermore, out of 9,183 new commitments in CY 2000, there were 3,548 (38.6%) probation violators. The number and percentage of probation violators increased in CY 2001 to 4,067 (41%) out of 9,995 new commitments.
- Parolees who violate the conditions of their parole without committing a new crime (technical violators) may be admitted to jail and eventually prison, but are not counted in state arrest statistics. The overall state responsible parole population and the parole violator population decreased during the 1990s. However, the number of technical parole violators increased from 1994 to 1998 but has begun to decrease since 1999. In CY 1992, 271 technical violators comprised 17% of the total parole violator population of 1,591. By CY 2001, the number of technical violators increased to 255, or 34% of the total parole violator population of 751.
- Persons who are arrested on local ordinance warrants, and those arrested for traffic misdemeanor or traffic felony offenses, are not included in state arrest statistics.

#### **Increased lengths of stay and stacking effects due to parole abolition and sentencing reforms**

From CY 1999 to CY 2001, the state responsible prison population increased from 31,057 to 33,798 or by almost 9%, and the number of new state responsible commitments increased by almost 17% from 8,569 to 9,995. This suggests that part of the growth in prison populations during this period may be due to the beginning of the predicted 'stacking effect' produced by the parole abolition and truth-in-sentencing reforms enacted in 1994. Under these reforms, offenders sentenced for crimes committed on or after January 1, 1995, are no longer eligible for parole and other early-release mechanisms, and sentences for certain offenders were lengthened. The 'stacking effect' results as the offenders serving these longer sentences begin to accumulate (or 'stack') in the DOC population. There is some evidence for this effect in the

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<sup>4</sup> A placement is not equivalent to an individual because an individual can have more than one placement.

length of stay figures for state responsible offenders. In FY 1999, the average length of stay for these offenders was 38 months. By FY 2001, the average length of stay had increased to 43 months. The population is increasing due to both average lengths of stay increasing and higher numbers of new commitments.

It also appears that the average length of stay has been increasing for local responsible jail offenders. However, uncertainties concerning local jail offender data make it impossible to confirm this at the present time.

## **Court Case Trends**

Numbers of court cases and convictions provide another potential indicator of offender trends that may influence offender populations. Data for the period 1991 through 2001 show increases in circuit court criminal cases, and juvenile cases in juvenile courts. Criminal cases in general district courts decreased over the decade, but increased in 2001. Felony convictions in Virginia increased in 2001 compared to 2000.

- The number of new criminal cases commenced in Virginia's circuit courts grew from 105,405 in 1991 to 161,648 in 2001, an increase of 53%. The number of defendants seen in criminal (misdemeanor and felony) cases in circuit courts grew from 56,280 in 1991 to 72,136 in 2001, an increase of 28%.
- The number of new criminal cases in Virginia's general district courts decreased from 471,250 in 1991 to 394,408 in 2001, a decrease of 19%. Although the number of new criminal cases decreased over last decade, the number of these cases increased slightly from 393,339 in 2000 to 394,408 in 2001.
- The number of new juvenile cases (excluding domestic relations cases) in Virginia's juvenile and domestic relations courts increased from 201,700 in 1991 to 304,216 in 2001, an increase of 51%.
- The number of felony convictions in Virginia (represented by the number of felony sentencing events) increased by 11% from 18,449 in FY 2000 to 20,492 in FY 2001. The number of felony sentencing events serves as a proxy for the number of felony convictions. A felony sentencing event includes all offenses for which an offender is sentenced on the same day and the same time<sup>5</sup>.

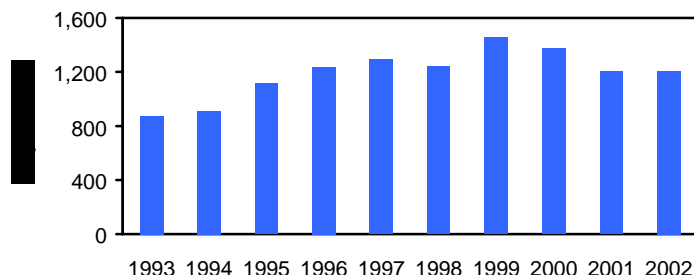
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<sup>5</sup> Data Sources: Court case numbers: Virginia State of the Judiciary Annual Reports for 1991 and 2001, Supreme Court of Virginia. Sentencing events numbers: Virginia Criminal Sentencing Commission Annual Report 2001.

## Factors Influencing Juvenile Offender Population

Figure 9 indicates that the state responsible juvenile population experienced the largest growth (22%) from FY 1994 to 1995. After peaking in October 1999, the juvenile population has steadily declined through the end of FY 2002. Much of the decline is due to declining admissions. Juvenile admissions trends are summarized in Section VI.

**Figure 9: June State Responsible  
Juvenile Offender Population  
FY 1993-2002**



The following discussion provides a brief description of other factors that may influence changes in the state responsible juvenile population:

### The impact of funding cuts to community-based programs

The period of declining juvenile admissions occurred when annual funding for the Virginia Juvenile Community Crime Control Act (VJCCCA) was increasing. VJCCCA provides funding to support community-based programs. From FY 1996 to FY 2002 VJCCCA funds increased from \$14.4 million to \$29.5 million.<sup>6</sup> The FY 2003 VJCCCA budget has been cut by a little more than 50%. DJJ believes that this reduction will lead to increases in both state responsible juvenile admissions and the state responsible juvenile population. Due to the critical role the admissions forecast plays in the population forecast, DJJ, in conjunction with the Policy Advisory Committee, produced its best estimate of the number of additional juveniles that might be committed to the Department given these changes. A more detailed discussion of the adjustment is given in Section VI. Virginia's State Responsible Juvenile Offender Population, subsection *FY 2003 Juvenile Admissions and Population Forecast*.

There were some who speculated that the decline in juvenile admissions was associated with a general decline in juvenile crime. The evidence does not support this hypothesis. While admissions declined approximately 34% from FY 1995 to FY 2002, committable (mainly felony or class 1 misdemeanor) intake complaints declined only marginally. Juvenile intake complaints are DJJ's preferred measure for tracking Virginia's juvenile delinquency trends<sup>7</sup>, and from FY 1996 to FY 2002 the average decline was approximately 2%. (see *Table 1* below).

**Table 1: Committable Juvenile Intake Complaints FY 1996 to FY 2002**

<sup>6</sup> The VJCCCA replaced the Juvenile Non-Secure Block Grant Program in January 1996.

<sup>7</sup> Virginia's Department of Juvenile Justice has found that tracking juvenile intake complaints to be a much more reliable and complete method for summarizing juvenile "arrest" and crime trends when compared to data provided in the U.S. Justice Department's Uniform Crime Report (UCR).

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
<b><i>Felony and Class 1 Misdemeanor Intake Complaints</i></b>	53,734	53,740	56,181	55,684	54,293	53,763	53,465
<b><i>Year to Year Percent Change</i></b>		-2%	5%	-1%	-2%	-1%	-1%

This implies that there was little change in Virginia's juvenile crime over this time period. DJJ believes that the observed decrease in juvenile admissions resulted in large part from the greater number of alternatives to DJJ commitment provided by VJCCCA programs.

### **Loss of funding for Peninsula Marine Institute and the Norfolk Marine Institute**

The Peninsula Marine Institute (PMI) and the Norfolk Marine Institute (NMI) were programs that served local youth but that were funded by the state. State funding for both programs has been eliminated. Together the two programs served 132 juveniles in FY 2001. Of those youths served by these programs, 104 were eligible for commitment to DJJ. See Section VI. Virginia's State Responsible Juvenile Offender Population, subsection *FY 2003 Juvenile Admissions and Population Forecast* for a projection of the impact on juvenile admissions due to this change.

The Norfolk Department of Social Services has committed to funding the NMI in FY 2003, but the program will serve a different population than previously served. The impact of this change is unclear.

### **Availability of alternatives to correctional center incarceration for juveniles with less serious offenses**

Between the end of FY 2001 and the end of FY 2002, post-dispositional (post-d) detention capacity increased from 104 to 137. As new detention homes become operational over the next two fiscal years, this capacity is projected to expand. The increase in capacity may allow judges the option to sentence more low-level juvenile offenders to be held locally, thereby potentially decreasing admissions to state correctional centers. See Section VII. Virginia's Juvenile Detention Home Population for a summary of historical and projected pre- and post-disposition detention home capacity.

Tempering the impact of this additional space is the fact that the use of post-d capacity imposes additional costs that must be borne by the locality. So, even though this space is available, local authorities may choose not to use it as they evaluate their funding priorities. There is funding for 50 intermediate sanction boot camp beds at Camp Kenbridge for FY 2003. This represents a decrease in funding from 100 beds in FY 2002. See Section VI. Virginia's State Responsible Juvenile Offender Population, subsection *FY 2003 Juvenile Offender Admissions and Population Forecasts* for an estimate of the impact on admissions due to this change.

### **Legislative Changes**

Effective July 2000, the *minimum* offense criteria for committing a juvenile to the Department of Juvenile Justice increased from one Class 1 misdemeanor with a prior adjudication for at least

one felony or *one* misdemeanor, to one Class 1 misdemeanor with a prior adjudication for at least one felony or *three* Class 1 misdemeanors (*Code of Virginia* statute §16.1-278.8). This change resulted in a decrease in misdemeanor admissions to the Department during FY 2001. DJJ believes that additional declines in admissions levels that are attributable to this change are unlikely. Analysis of admissions in FY 2002 supports this conclusion. (Note: The legislation did not impact the court's authority to commit a juvenile for a felony offense, regardless of prior adjudications.)

In July 2001 an amendment to *Code of Virginia* statute §16.1-285.1(a) became effective and the amendment has implications for the number of determinate commitments that the Department of Juvenile Justice may receive from Circuit Court cases. After a full year under this new law DJJ analysis shows that the number of commitments from Circuit Courts grew at a faster rate than commitments coming from Juvenile and Domestic Relations District Courts. Specifically, while total commitments are down 17% since FY 2000, commitments from circuit court are up 56% for the same time period. Circuit Court commitments currently represent about 13% of total commitments, but that number appears to be increasing.

Effective July 1, 2002 an amendment to *Code of Virginia* statute §16.1-272.1 provides the Circuit Court the authority to sentence a juvenile to serve a portion of his sentence with DJJ as a Serious Offender (*Code of Virginia* statute §16.1-285.1), and the remainder at the Department of Corrections. It is unclear how this change may effect juvenile admissions and population.

## **Population Management**

In 1999, per the recommendation of the Policy Advisory Committee, the process of population management for state responsible juveniles was made more efficient and systematic. The population of state responsible juvenile offenders is managed according to the Department's length of stay system. Section VI of this report explains the length of stay and elaborates how the Department of Juvenile Justice manages the system.

## IV. Virginia's State Responsible Offender Population

### ***State Responsible New Court Commitment Background***

Since state responsible offenders may be admitted and held in local jails, the production of an admissions stream that counts the number of offenders for whom the Department of Corrections (DOC) has responsibility has become increasingly complicated over time. In 1996, the Technical Advisory Committee adopted an admissions stream generated by establishing the final sentence date as the point of admission. Utilizing this admissions stream facilitates the projection of the state responsible offender population, regardless of housing location. The new commitment forecast adopted and presented in this report is based on this final sentencing based stream.

Since normally it may take up to six months to receive, process and verify an offender's sentence and jail credit information and compute time calculations, admission data for the six months ending June 2002 (end of FY 2002) are not considered to be complete. Therefore, trends presented for SR new court commitments are usually provided as of the end of calendar year 2001. As occurred in CY 1999 and as noted last year, the last quarter of calendar year 2000 was lower than the previous quarters and was monitored by DOC. In fact, DOC has determined that there was a backlog involved in the receipt of court orders, jail credit forms and the intricate verification process associated with finalizing CY 2000 fourth quarter data. After detailed discussion, the CY 2000 numbers used in the new commitment forecast stream were revised. There had been discussion that the LIDS database might be useful in assessing the number of cases that might be missing from the last quarter of annual admissions. If offenders on LIDS with state responsible sentences who were not awaiting trial, not in contract beds, and not identified on DOC's admissions stream could be identified by their final sentencing date, that might provide a count of additional admissions to be considered. DOC lag time issues and rebuilding LIDS data from FY 2000 through FY 2002 interfered this past year with completing this consideration. DOC will continue to review and assess if this can be implemented.

### ***State Responsible New Court Admission Trends***

*Table 2* shows the historical trends concerning state responsible new court commitments from CY 1992 through CY 2001 by drugs, nonviolent and violent offense groupings and by male and female offenders.

- In CY 2001, 812 additional offenders were admitted to state prisons compared to 2000. This represents an increase of 8.8% over the 2000 figure. Almost half of this increase was in male violent commitments.
- From 1992 to 2001, there was a ten-year increase of 2,075 or 26.2% in new commitments. More than half (1,178 or 56.8% of this 2,075 increase) was due to an increase in nonviolent commitments. The overall increase in the number of new commitments averaged 3.6% per year since 1992, corresponding to an additional 284 offenders admitted per year.
- The average annual growth rate for female new commitments was 5.7%, compared to the rate reported for male new commitments, which was 3.3% per year over the last ten years. Female offenders comprised 10% of the admissions cohort in CY 1992. In 2001, 12% of the offenders admitted were female. In CY 2001, female new court commitments increased by 124 offenders or 11.8% from 1,050 in 2000 to 1,174 in 2001. In CY 2001, male new commitments increased by 688 or 8.5% from 8,133 to 8,821.

- Annual admissions began to decline in 1993 and level off through the end of 1995. The number of new commitments decreased by 3% in 1993 (272 offenders). In 1995, 142 fewer offenders were sentenced to prison than were reported in 1993.
- One year after the 1995 abolition of parole and the implementation of voluntary sentencing guidelines, trends were reversed in 1996 when 968 additional new commitments were recorded. This one-year increase of 13% represents the largest one-year increase over the past 10 years.

**Table 2: Virginia Department of Corrections Date Sentenced New Commitment Stream**

TOTAL NEW COMMITMENTS	DRUGS		NONVIOLENT		VIOLENT		TOTAL MALE	TOTAL FEMALE	TOTAL
	Male	Female	Male	Female	Male	Female			
CY 1992	2,118	245	2,935	433	2,094	95	7,147	773	7,920
CY 1993	2,111	244	2,808	399	2,004	82	6,923	725	7,648
CY 1994	1,982	264	2,698	405	2,046	88	6,726	757	7,483
CY 1995	1,861	249	2,952	452	1,884	108	6,697	809	7,506
CY 1996	2,041	302	3,553	534	1,930	114	7,524	950	8,474
CY 1997	2,021	296	3,613	551	2,280	124	7,914	971	8,885
CY 1998	1,849	295	3,485	547	2,344	139	7,678	981	8,659
CY 1999	1,901	310	3,508	509	2,212	129	7,621	948	8,569
CY 2000	2,098	292	3,582	588	2,453	170	8,133	1,050	9,183
CY 2001	2,098	327	3,871	675	2,852	172	8,821	1,174	9,995
Change 2000 - 2001	0 0%	35 12.0%	289 8.1%	87 14.8%	399 16.3%	2 1.2%	688 8.5%	124 11.8%	812 8.8%
Total Change 1992 - 2001	-20 -0.94%	82 33.5%	936 31.9%	242 55.9%	758 36.2%	77 81.1%	1,674 23.4%	401 51.9%	2,075 26.2%

- In 1997 the number of new commitments increased by 411 offenders or 5% over the 1996 level. New commitments decreased in 1998 by 226 offenders or 3% relative to the 1997 commitments. They also decreased in 1999 by 90 offenders from 8,659 in 1998 to 8,569 in 1999.
- There were 1,859 serious violent commitments (capital murder, homicide, manslaughter, abduction, rape/sexual assault and robbery) recorded in 2001. This is 440 or 31% more than the 1,419 serious violent commitments reported in 1995—the year truth-in-sentencing guidelines became effective. The number of new commitments in all violent offense categories increased in 2001. Two offense categories each represent approximately one-

quarter of the violent commitments, assault with 830 or 27.4% and robbery with 779 or 25.8%.

- There was a large overall increase in 2001 for total nonviolent new commitments (9% or 376 compared to 3.8% or 153 in 2000). The number of new commitments in all nonviolent offense categories also increased in 2001.
- In 2000, there were 179 additional drug offenders sentenced to prison—an increase of 8% over 1999. This increase continued in 2001 with an additional 35 offenders—an increase of 2% over 2000. In 2000, the increase in drug commitments was primarily in the Other Drug categories such as marijuana and lesser drug crimes. The three categories that increased in 2001 were heroin sales, heroin possession, and cocaine possession. The number committed in 2001 for these three categories is at a 10-year high.
- With the implementation of truth-in-sentencing in January 1995, the composition of the admissions cohort shifted from the parole system to truth-in-sentencing. By December 2001, 97% of all admissions were governed by truth-in-sentencing (this includes pure “new” law; not parole eligible) and combination (sentenced under both “old” and “new” law conditions). Only 3% of all admissions were pure “old” law (parole eligible) admissions.
- As a result of parole abolition in January 1995, parole violator admissions began to decline in 1996. It peaked in 1994 when 2,057 violators were returned to prison. The trend was reversed in 1995 when the number of parole violators returned to prison declined by 9%. This trend continued in 1996 and 1997. However, the trend was reversed again in 1998, when an additional 157 parole violators were returned—a growth of 12%. In CY 1999, the number of parole violators returned to prison decreased dramatically. In CY 1999, there was a decrease of 103 or 21% in technical parole violators and a more dramatic decrease of 474 offenders or 47% for parole violations with a new charge. However, in CY 2000 the parole violation trend somewhat stabilized with an increase of 47 offenders or 5%.
- In CY 2001, the number of parole violators decreased by 212 or 22%. The number of technical parole violators decreased by 118 or 32% and the number of parole violations with a new charge decreased by 94 offenders or 16% in 2001.

### ***New Court Commitment Forecast Background***

The new commitment forecast adopted and presented in this report is based on the final sentence date as the point of admission. A final sentencing based stream from January 1994 through December 2001 was used by the Department of Planning and Budget (DPB) and the Department of Corrections (DOC) to generate various statistical ARIMA models. Quarterly data were used by DPB and DOC to independently arrive at their best statistical ARIMA models for six subgroups (by gender and offense) of new commitments. These statistical models were reviewed by the Technical Advisory Committee and among the 12 models presented, six ARIMA forecasts were adopted (DPB’s male models of violent, nonviolent and drug offenders were chosen because of having the best fit statistics and DOC’s female forecasts of violent, nonviolent and drug offenders were chosen because they had the best fit statistics). When the Technical Advisory Committee’s new commitment forecast was presented to the Policy Advisory Committee, they chose to add an additional 186 commitments to the CY 2002 forecast. The add-on to this one-year was suggested in anticipation that the CY 2001 new commitment stream would likely fill-in by another 100 to 200 cases. Whenever it can be anticipated that an impact cannot be represented in the existing data, it is common that the Policy Advisory Committee make an appropriate adjustment. There was a discussion, as well, that with the

recent budget cuts, some previous community diversion programs would not be available and result in an increase in the number of commitments that could not be reflected in the historical data.

Table 3 shows both the CY and FY new commitment forecast. As can be seen in the CY and FY forecast, the number of commitments is anticipated to increase each year. The average change for CY 2002 to CY 2007 is 314 commitments or 2.9%.

**Table 3: State Responsible New Commitment Forecast by CY and FY**

New Commitment Last Sentence Date	Total SR Cases		New Commitment Last Sentence Date	Total SR Cases
CY 2002	10,245	*	FY 2003	10,359
CY 2003	10,431		FY 2004	10,602
CY 2004	10,794		FY 2005	10,977
CY 2005	11,151		FY 2006	11,328
CY 2006	11,508		FY 2007	11,691
CY 2007	11,877		FY 2008	12,060

\* CY 2002 contains an add-on adjustment of 186.

### **State Responsible Release/Parole Population and Parole Grant Rate Trends**

In addition to reviewing the new commitments and parole violators that make up the new admission stream, the DOC in conjunction with the Virginia Parole Board tracks state responsible releases to discretionary and mandatory parole. In addition to parole releases, the DOC also compiles the number of direct discharges to the community. Such data is needed for the simulation model that DOC uses to produce a state responsible forecast.

- Preliminary FY 2002 data indicate that 9,769 offenders were released from state responsibility. Of those released, 25% were released to parole supervision (19% mandatory and 6% discretionary) while 75% of those released were offenders sentenced under truth-in-sentencing and not subject to parole.
- The highest overall (LR & SR) parole grant rate reported was for FY 1990 at 47%. In June 1994, a new parole board was appointed and the overall grant rate dropped to 25% in FY 1994. The grant rate decreased again in FY 1995 to 14%. In FY 1996 and FY 1997, grant rates increased slightly to 18% and 20%, respectively. In May 1998, the existing Parole Board was replaced and the overall grant rate decreased to 16% for FY 1998. Under this new board, the grant rate stabilized between 7% and 8%. During FY 2002 the existing Parole Board was again replaced but the overall grant rate stayed approximately the same or 8.0%. The SR parole grant rates for FY 1999 through FY 2002 are slightly lower than the overall (LR & SR) grant rates. The SR grant rates for these years are: 6.5%, 5.1%, 7.9%, and 8.0%, respectively. The SR parole grant rates for FY 2002 for hearings 1 through 5 are as follows: 8.3% for hearing 1; 10.6% for hearing 2; 12.1% for hearing 3; 9.1% for hearing 4 and 6.1% for hearing 5.
- In FY 2002, average grant rates for violent offenses were extremely low, with an overall grant rate of 3%. However, the grant rates for nonviolent and drug offenses were significantly higher, with an overall grant rate of 13% for nonviolent offenses and 20% for drug offenses.

## ***State Responsible Population Forecast: A Combination of ARIMA and Simulation Models***

The state responsible offender forecast was produced using two different models that were averaged. The Department of Corrections used the Prophet simulation model to produce a state responsible forecast and the Department of Planning and Budget used time series ARIMA modeling. The DPB model used end of month SR populations in prison and jail from January 1994 through July 2002. The Prophet simulation software has been used by the Department of Corrections since 1986 to produce offender population forecasts. This computerized simulation model mimics the flow of offenders through the correctional system over a six-year forecast horizon and produces separate monthly forecasts for 120 individual offender groups. The number of offenders projected to be in each group, their sentences, length of stay, credits, and other elements that govern how long offenders remain in prison, are different for each group.

In order to accurately simulate the movement of offenders through the system, data which describe "who" is admitted to prison and "how long" admitted offenders remain confined must be compiled, analyzed, and used as an input to the simulation model. The resulting simulation replicates or mimics how the system performed during the time period represented in the data. Current projections are based on data describing offenders confined at the end of CY 2001 and those admitted and released during CY 2001. The simulation period begins January 1, 2002. The simulation model incorporates certain assumptions described in the next section. This ability to explicitly incorporate assumptions also allows for changes to policy and law to be assessed, and their expected impact on the SR population.

A benefit of the DPB ARIMA model is that it takes advantage of the most recent seven months of data that are available prior to the completion of the SR population forecast (i.e., it contains actual data for January through July 2002) which continues to show the increase in population while the simulation model contains data through December 2001. The ARIMA model continues to reflect the stacking of offenders and that new law offenders are serving longer sentences. The simulation model is loaded with the frequencies, sentences, and numerous characteristics of CY 2001 new commitments, releases and the stock population confined December 31, 2001. FY 2002 Parole Board discretionary grant rate and parole hearing information is also used in the simulation model. The simulation model assigns probabilities and simulates the flow of the new commitment forecast cases through the forecast horizon to achieve monthly numbers by various identification groups and characteristics. The Technical Advisory Committee arrived at the recommended population forecast by averaging of the two models to produce a blended state responsible forecast for FY 2003 to FY 2008. The average percentage change for FY 2004 through FY 2008, the most recent five years of forecasted values, was used to arrive at the population forecast for FY 2009 through FY 2012.

## ***State Responsible Prison Population Trends***

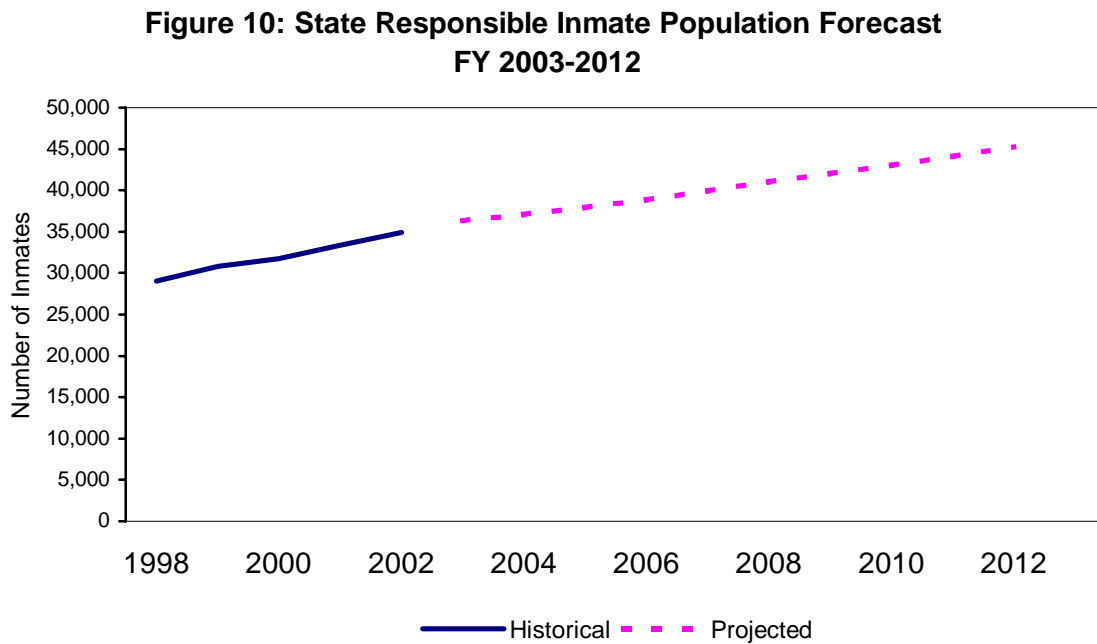
- Between FY 1992 and 2002, growth in the offender population averaged an additional 1,507 offenders per year or 5.9% annual growth rate. The growth observed was the result of increased admissions.
- The offender population growth between FY 1993 and 1995 can be attributed in large part to declining parole grant rates. During this period, the state responsible population increased by 6,604 offenders (32% growth) or an increase of 2,201 offenders per year.
- Between FY 1995 and 1996, the state responsible population grew by 1,379 offenders, an increase of 5%. However, between FY 1996 and 1997, the state responsible population remained flat. Between 1997 and 1998, the observed growth was 300 offenders or an increase of 1%.
- In FY 2000, the state responsible population grew by 877 offenders, an increase of 2.8%. In FY 2001, the state responsible population grew by 1,651 offenders or 5.2%. Between FY 2000 and 2001, the state responsible population grew by 1,564 offenders, an increase of 4.7%. This growth in population can be attributed to continued low parole grant rates, increased serving times for offenders under the no parole sentencing structure and increases in the new court commitments.

## ***Key Forecast Assumptions for Simulation Model***

- The sentence group composition of future annual admissions is assumed to be the same as the composition of admissions reported in CY 2001 in terms of admitting charges, sentences received, jail credit days, and good time earning potential.
- The state responsible population forecast is based on an average discretionary parole grant rate of 8%. The overall discretionary parole grant rate is assumed to average 8% over the next five years—8.3% for hearing 1; 10.6% for hearing 2; 12.1% for hearing 3; 9.1% for hearing 4; and 6.1% for hearing 5. This represents an assumed increase of 0.1% over the observed grant rate in FY 2001 of 7.9%.
- New admissions governed by truth-in-sentencing are assumed to continue to phase-in over time. By January 2003, it is assumed that parole eligible admissions will be phased out and all admissions will be governed by truth-in-sentencing.
- Offenders governed by truth-in-sentencing are projected to serve 87% of imposed sentences less all jail credits. Data through the end of CY 2001 indicate that violent offenders received good time credits totaling 12.2% of their sentence, while nonviolent received good time credits totaling 13.5% and drug offenders received credits totaling 13.3%. Therefore, future violent admissions are projected to serve 87.8% of imposed sentences less jail credits and nonviolent and drug offenders are projected to serve 87% of imposed sentences.
- The number of parole violators returned to prison is projected to decline over the forecast horizon. Technical violators are assumed to serve 14 months upon returning to prison. Violators returned to prison with new charges are assumed to receive sentences consistent with new admissions from court.

## ***FY 2003 State Responsible Forecast***

*Figure 10* and *Table 4* show the FY 1998 to FY 2002 historical state responsible offender population and the offender population forecast for FY 2003 to FY 2012.



Data Source: Historical figures were supplied by the Virginia Department of Corrections.

Projected forecast was developed by the Technical Advisory Committee for Offender Population Forecasting and approved by the Policy Advisory Committee for Offender Population Forecasting.

**Table 4: June Historical and Projected State Responsible Offender  
Population Change**

<b>Historical<sup>1</sup></b>		<b>Annual Change</b>	
<b>End of Fiscal Year</b>	<b>Offenders</b>	<b>Difference</b>	<b>Percentage<sup>3</sup></b>
FY1998	29,043	-----	-----
FY1999	30,826	1,783	6.1%
FY2000	31,703	877	2.8%
FY2001	33,354	1,651	5.2%
FY2002	34,918	1,564	4.7%
<b>Projected<sup>2</sup></b>			
FY2003	36,310	1,392	4%
FY2004	37,070	760	2.1%
FY2005	37,926	856	2.3%
FY2006	38,864	938	2.5%
FY2007	39,960	1,096	2.8%
FY2008	40,990	1,030	2.6%
FY2009*	42,014	1,025	2.5%
FY2010*	43,065	1,050	2.5%
FY2011*	44,141	1,077	2.5%
FY2012*	45,245	1,104	2.5%
<b>Average Percentage Change per Year</b>			
1998-2002			4.7%
2004-2008			2.5%

<sup>1</sup>Data Source: Historical data were supplied by the Virginia Department of Corrections. FY 2000 to FY 2002 revised because of historical rebuild of LIDS database.

<sup>2</sup>Projected forecast was developed by the Technical Advisory Committee for Offender Population Forecasting and approved by the Policy Advisory Committee for Offender Population Forecasting.

<sup>3</sup>All percentages are rounded to the nearest tenth.

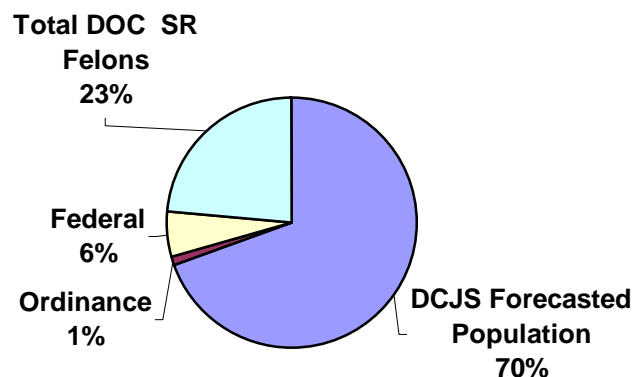
\*Figures for FY 2009 to FY 2012 are extrapolated using the average percentage change from FY 2004 to FY 2008.

## V. Virginia's Local Responsible Offender Population

### *Jail Population Trends*

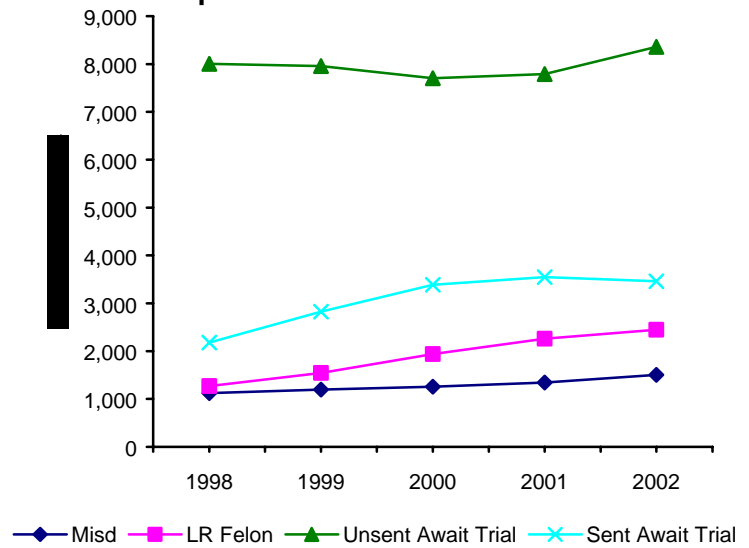
- Following a recommendation from the Technical Advisory Committee, projections for the total local responsible offender population have been aggregated based on four sub-populations: sentenced awaiting trial, local responsible felons, misdemeanants, and unsentenced awaiting trial for other charges. Furthermore, the Technical Advisory Committee proposed and the Policy Advisory Committee adopted Average Daily Population for projections for the total local responsible population. Average Daily Population is calculated by dividing monthly offender totals by the number of days in the month. Average Daily Population is likely to be the most accurate measure of the overall monthly population in jail. This is the second year that the forecast departs from tradition because it excludes ordinance offenses for which per diems are not paid. The source of the historical jail data is the Compensation Board's Local Inmate Data System (LIDS) for the period July 1997 to June 2002.
- *Figure 11* shows the composition of the total confined population in local jail facilities for FY 2002. The monthly average of the total confined local jail population for FY 2002 was 22,754. This represents a 7% increase over the FY 2001 annual population of 21,188. The local responsible (LR) offender population forecasted by DCJS is that part of the population for which jails receive reimbursement from the Compensation Board. The LR forecasted population comprises about 70% of the total offender population confined in local jails. The remainder of the 22,754 are state responsible offenders housed in jails (23%), federal offenders (6%) and ordinance offenders (1%).

**Figure 11: Composition of Confined Population in Local Jail Facilities  
FY 2002**



- Four groups of offenders comprise the forecasted local responsible offender population: unsentenced awaiting trial for other charges, sentenced awaiting trial, misdemeanants and local responsible felons. In FY 2002, the average total forecasted local responsible jail population was 15,770 offenders. This represents a 6% increase over the FY 2001 average annual population of 14,941. There were at least two factors contributing to this increase. First, as of September 1998, housing responsibility for felons with a total sentence of "12 months" was shifted from the state prison system to local jails. On average, felons with a "12 months" sentence accounted for 13% of the monthly total local responsible population. The implementation of the Virginia Exile/Bail Bond Reform may also have contributed to the growth. However, due to the fact that LIDS was not designed to support this type of analysis, the true impact could not be determined.

**Figure 12: Average Composition of Forecasted Local Responsible Jail Population FY 1998-2002**

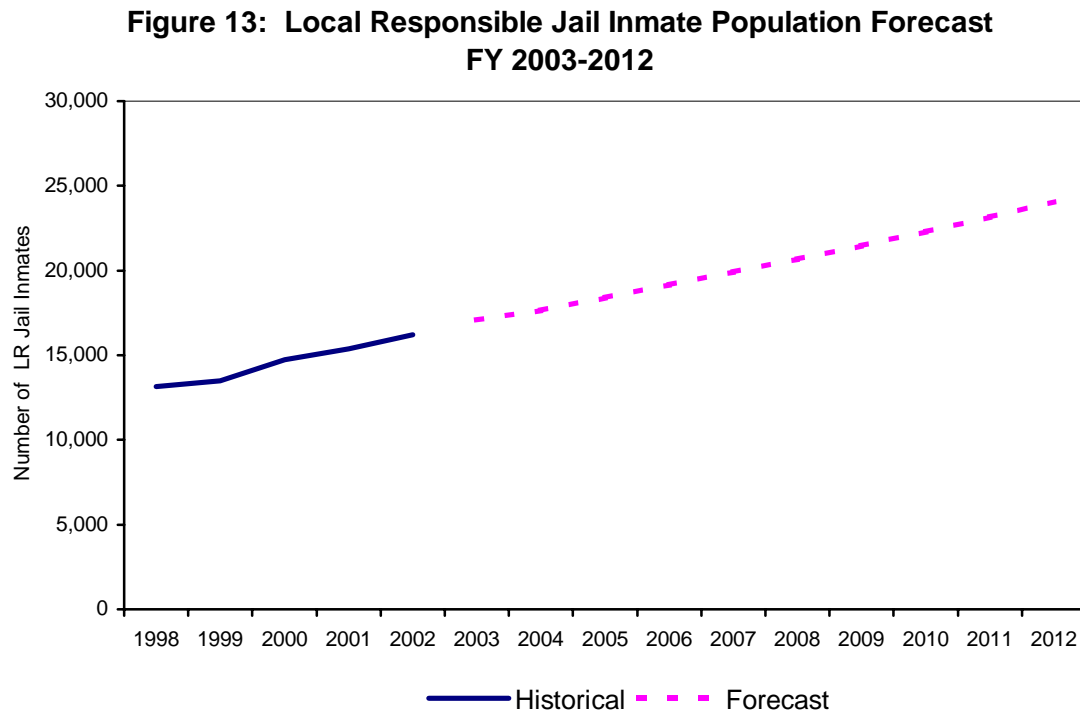


- Figure 12* shows the average FY 1998 to 2002 composition for the four subgroups of the local responsible population. As has been the case historically, the average FY 2002 unsentenced awaiting trial category was the largest component of the total local responsible forecasted population (8,357 or 53%).
- Unsentenced awaiting trial offenders, the largest part of LR forecasted population, grew from 8,005 offenders in FY 1998 to 8,357 offenders in FY 2002, an increase of 4%. Although this group's share of the total forecasted LR population has declined from FY 1998 to FY 2000, it grew in the most recent two years, with a 7% growth from FY 2001 to FY 2002. It is important to note that any change in the overall number of individuals in this confinement group is likely to have more impact than any other confined LR group.
- The average for sentenced offenders awaiting trial for other charges, the second largest part of the LR forecasted population for FY 2002, comprised 22% of the local responsible jail population (3,461 offenders). This group's share of the total forecasted LR population has grown from FY 1998 to its current 22%. From FY 1998 to FY 2002 there was a 59% increase in the number of sentenced offenders awaiting trial for other charges (from 2,179 to 3,461). Almost all of this increase occurred between FY 1998 and FY 2000. One possible contributing factor to the increase in this population is an overall increase in jail capacity, including new and expanded facilities. However, from FY 2001 to FY 2002, sentenced awaiting trial offenders declined by 3%. A possible explanation for the decline is that the processing time for this group has been faster in recent years than in the past as jails have worked aggressively in getting updated paperwork and disposition notices from courts, which seems to have an unstacking effect on this confinement group.

- Local responsible felons are convicted felons with sentences within a certain defined sentence time range. Currently, local jails have responsibility for housing two groups of felons:
  - 1) Individuals convicted of a felony offense and having a sentence length less than one year, if the offense was committed on or after January 1, 1995. As of September 1998, this group also included individuals with a sentence of "12 months."
  - 2) Individuals convicted of a felony offense and having a sentence length less than or equal to two years, if the offense was committed prior to January 1, 1995.
- Local responsible felons comprised 16% (2,446) of the local responsible population in FY 2002, compared to only 10% of the total in FY 1998. Local responsible felon offenders increased from 1,269 in FY 1998 to 2,446 in FY 2002, an increase of 93%. This group showed the largest percentage increase among the four groups that comprise the LR forecasted offender population. Most of this increase occurred between FY 1999 and FY 2001, with only an 8% increase in FY 2002. Historically, there have been shifts in the definition of local responsible felons. These changes in definition are a device for adjusting the number of felons that are "state responsible." By adjusting the required sentence length for classification as "state responsible," the number of local responsible felons is either increased or decreased proportionately. Almost all of the changes over time in this subgroup are consistent with changes in the definition of state responsible felons, thereby contributing to the overall increase in the number of local responsible offenders.
- Misdemeanants are offenders convicted and sentenced on only misdemeanors and who do not have other charges pending. In FY 2002, misdemeanants comprised 10% of the total LR forecasted population. Between FY 1998 and FY 2002, this group made up 9% to 10% of the population. Misdemeanant offenders increased from 1,124 in FY 1998 to 1,506 in FY 2002, an increase of 34%. The largest increase in the group (12%) occurred between FY 2001 and FY 2002.

## ***FY 2003 Local Responsible Forecast***

*Figure 13 and Table 5 depicts the FY 1998 to FY 2002 historical local responsible jail offender population and the LR offender population forecast for FY 2003 to FY 2012.*



Data Source: Historical figures come from the Compensation Board's Local Inmate Data System.

Projected forecast developed by the Technical Advisory Committee for Offender Population Forecasting and approved by the Policy Advisory Committee for Offender Population Forecasting.

**Table 5: June Historical and Projected Local Responsible Jail  
Offender Population Change**

<b>Historical<sup>1</sup> Average Fiscal Year</b>	<b>Offenders</b>	<b>Annual Change Difference</b>	<b>Percent<sup>3</sup></b>
FY1998	13,141	-----	-----
FY1999	13,487	346	3.6%
FY2000	14,719	1,232	9.1%
FY2001	15,361	642	4.4%
FY2002	16,214	853	5.6%
<b>Projected<sup>2</sup></b>			
FY 2003	17,093	879	5.4%
FY 2004	17,648	555	3.2%
FY 2005	18,390	742	4.2%
FY 2006	19,164	774	4.2%
FY 2007	19,904	740	3.9%
FY 2008	20,655	751	3.8%
FY 2009*	21,463	808	3.8%
FY 2010*	22,302	839	3.8%
FY 2011*	23,174	872	3.8%
FY 2012*	24,080	906	3.8%
<b>Average Percentage Change per Year</b>			
1998-2002			5.6%
2004-2008			3.8%

<sup>1</sup>Data Source: Historical data are based on the Local Inmate Data System (LIDS).  
*Table 2* contains June historical and projected Jail Population Change.

<sup>2</sup>Projected forecast developed by the Technical Advisory Committee for Offender Population Forecasting and approved by the Policy Advisory Committee for Offender Population Forecasting.

<sup>3</sup> All percentages are rounded to the nearest tenth.

\*Figures for FY 2009 to 2012 are extrapolated using the average percentage change from FY 2004 to FY 2008.

## VI. Virginia's State Responsible Juvenile Offender Population

Virginia's juvenile justice system differs from its adult system because the Commonwealth recognizes that young offenders are more responsive to rehabilitative treatment than adult criminals. The juvenile justice system has the dual objective of promoting accountability and reform. It addresses reform by providing educational services and treatment programming designed to reduce the chance that a juvenile will commit further offenses upon release.

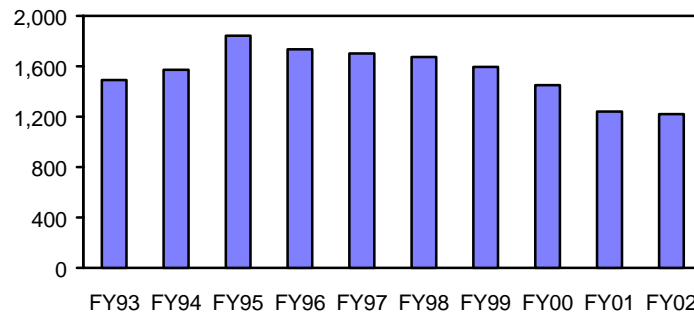
Because reform is a major focus of the juvenile justice system, the structure of committing a juvenile offender to the state is different from that of the adult system. In contrast to the adult correctional system, the Juvenile and Domestic Relations District Courts commit a very small percentage of juvenile offenders with a determinate or fixed length sentence. Over 90% of the juveniles committed to the Department of Juvenile Justice receive an indeterminate sentence. This means that the Department of Juvenile Justice, rather than a judge, determines the length of the juvenile's commitment to the state. The projected length of stay is dependent upon the youth's committing offenses, prior offenses, and length of prior record. However, the actual length of stay will also depend upon the youth's completion of mandatory treatment objectives (such as substance abuse or sex offender treatment) and upon the youth's behavior within the institution.

### **Admission Trends**

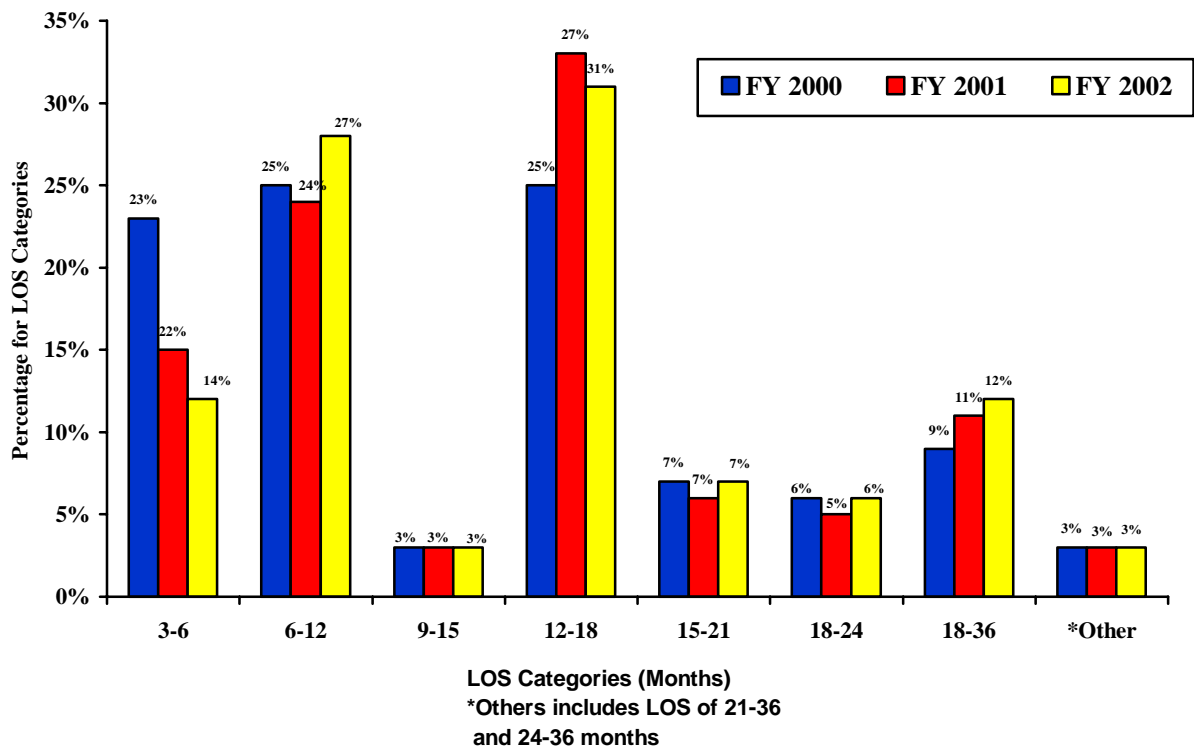
- Changes caused by the state budget reductions have led to even greater uncertainty than in years past on the admissions and, subsequent, population forecasts. The Policy Advisory Committee and the Technical Advisory Committee in conjunction with the Department of Juvenile Justice have together produced their best estimates of how the state responsible juvenile population will be impacted by program cuts and other changes imposed by the state's budget reductions. Careful analyses lead the Policy Advisory Committee to adjust the statistical admissions forecast by adding 120 admissions to the forecast produced by the statistical model for the first year of the forecast horizon. See subsection *FY 2003 Juvenile Offender Admissions and Population Forecasts* for more detail on how the number was produced.
- Additionally, DJJ has noticed a marked upward trend over the past fiscal year in the proportion of juveniles committed to DJJ from Circuit Court relative to those commitments coming from Juvenile and Domestic Relations District Court cases. DJJ believes that this is a direct result of an amendment to *Code of Virginia* §16.1-285.1(a), which specifies Circuit Court authority over juvenile cases, specifically, *serious offenders*. That change became effective in July 2001 and the Department believes that this trend could continue. (See Section III, subsection *Factors Influencing Juvenile Offender Population* for more detail.) These juveniles will, on average, receive longer sentences and stay with the Department for longer periods.
- Over the past decade, the annual growth rate of persons in Virginia aged between 10 and 17 averaged approximately 2%. Based on 2000 United States census data, that growth rate is forecast to slow to less than 1% per year from 2000 through 2005 and then decline by about 1% per year beginning in 2006.
- A juvenile's first exposure to the Department of Juvenile Justice occurs when a complaint is given to an intake officer. Starting in FY 1998 the number of juvenile criminal intake complaints has marginally trended down. See Section VII, Virginia's Juvenile Detention Home Population for more detail.

- Admissions to juvenile correctional centers have decreased 34% since FY 1995 (see *Figure 14*). The most dramatic single year decline measured 14% and occurred between FY 2000 and FY 2001. Analysis suggests that the magnitude of the decline was profoundly influenced by the change in the minimum commitment criteria. The impact of that change was felt much more quickly than anticipated. Nonetheless, further declines attributable to that change in the law are unlikely. Analysis of FY 2002 admissions supports that conclusion.

**Figure 14: State Responsible Juvenile Offender Admissions  
FY 1993-2002**



**Figure 15:  
Indeterminate  
Juvenile  
Commitments by  
Length of Stay FY  
2000-2002**



- In the FY 2001 report it was noted that the distribution of assigned indeterminate sentences had experienced some rather important changes when compared to the previous two years. In FY 2002 this trend continued. The proportion of juveniles who were placed with the lowest indeterminate sentence continued to decline while there was a general increase in the proportion of juveniles placed with higher indeterminate sentences. (see *Figure 15*) For example, during FY 2000 approximately 23% of juveniles were given a 3 to 6 month length of stay. In FY 2002 that proportion declined to approximately 14% of all FY 2002 admissions. In FY 2000 approximately 25% of admitted juveniles were given a 12 to 18 month sentence. In FY 2002 that proportion was 31%. The proportion of juveniles given an 18 to 36 month sentence increased from 9% to 12% from FY 2000 to FY 2002. It is believed that the change in the commitment requirement influenced these numbers.<sup>8</sup>
- The proportion of determinately sentenced offenders continues to be low, but relative to all admissions, it has grown. Between FY 1997 and 2002, the percentage of wards admitted with a determinate sentence increased from around 5% to just above 9%. Another significant trend is the increase in the average determinate sentence, from 36 months to almost 41 months over the same period.
- The *proportion* of wards identified with a need for mandatory sex offender treatment (sex offenders) continues to rise. This is largely a consequence of declining admissions. As a proportion of admissions, wards with this treatment status have increased from approximately 6% during FY 1999 to approximately 9% during FY 2002.

### ***Release/Length of Stay Trends***

- *Table 6* summarizes admissions and releases for FY 2002. Admissions exceeded releases by 9.

**Table 6: Juvenile Admissions and Releases During FY 2002**

	<b>Admissions</b>	<b>Releases</b>
1 <sup>st</sup> Quarter	274	304
2 <sup>nd</sup> Quarter	332	335
3 <sup>rd</sup> Quarter	290	270
4 <sup>th</sup> Quarter	324	302
Total	1,220	1,211

- Sex offenders serve time according to the treatment program length. According to the program facilitator, lengths of stay within the program can be between 24 and 36 months. Based on past trends (and built into the simulation model), approximately 68% of the wards within this program are staying over 24 months.

<sup>8</sup> Effective July 2000, the *minimum* offense criteria for committing a juvenile to the Department of Juvenile Justice increased from one Class 1 misdemeanor with a prior adjudication for at least one felony or *one* misdemeanor, to one Class 1 misdemeanor with a prior adjudication for at least one felony or *three* Class 1 misdemeanors (*Code of Virginia* statute §16.1-278.8).

## ***Factors Influencing Length of Stay***

### **Length of Stay Policy**

All indeterminately committed wards are assigned a length of stay (LOS) range by Department staff using guidelines that consider the offender's committing offenses, prior offenses, and length of prior record. The LOS range includes an early release date and late release date (for example, a 3-6 month LOS is assigned to misdemeanants). Wards will typically not be released before the early release date without the express approval of the Director. Reasons such as not completing mandatory treatment needs and/or committing institutional offenses could prolong the actual length of stay beyond the assigned range.

Wards serving an indeterminate commitment can experience different actual lengths of stay due to the variety of length of stay categories, treatment needs, or behavior.

### **Treatment Programs**

The Department of Juvenile Justice administers three treatment programs. They are *anger management*, *substance abuse treatment*, and *sex offender treatment*. Any of these could affect a juvenile's length of stay, but the most influential has been sex offender treatment.

Under the Department's current length of stay procedures, sex offender treatment may be assigned as a mandatory treatment if it is related to the ward's committing offense, if it is reflected in self-reported behavior, or if it is related to the circumstances of the committing offense (for example, a sexual battery charge that has been changed in a plea agreement to simple assault). These criteria enable Department staff to assign a treatment program that appears to best meet the ward's true needs. A ward's length of stay may be affected by a treatment assignment that is not reflected in the offense for which the ward was committed.

### **Institutional Offenses**

As noted above, a ward's release may be delayed if the ward is serving a sanction for an institutional offense. Under current guidelines, a ward will not be released if the ward has committed a moderate institutional offense within the previous 30 days, or a major institutional offense within the previous 90 days.

### ***Simulation Model***

- The 1999 Secretary of Public Safety's Report on Offender Population Forecasts FY 2000 to 2009 requested that the Department of Juvenile Justice develop a simulation model that would project the state responsible juvenile population for use in the 2000 forecast cycle.
- In addition to providing forecasts of the juvenile population, the simulation model provides two benefits that previous models could not provide. First, the model provides a more informative discussion of expectations within the juvenile system versus actual events. These discussions are necessary for understanding the fluctuations in the population and provide explanation that is included in the quarterly accuracy reports to the Secretary of Public Safety. Second, legislative proposals need to be evaluated to determine their impact on the juvenile offender population. The simulation model provides the benefit of allowing for "what if" scenarios for legislative decision-making. Because of its enhanced sophistication and flexibility with technical analysis, the simulation model is an improvement over previously used models.

## **Model Assumptions**

The following assumptions used in this forecast will be evaluated during FY 2003:

- The proportion of new admissions falling into each length of stay category will not change.
- 7.5% of wards admitted will be identified as needing a mandatory sex offender treatment program. This represents a change from last year's simulation assumption, revised to reflect more recent trends.
- 8.5% of wards admitted are assumed to receive determinate sentences. This also represents a change from last year's treatment of determinate commitments.
- The forecasted release rates remain unchanged.
- Actual future admissions are "reasonably" close to the admissions forecast.

## ***FY 2003 Juvenile Offender Admissions and Population Forecasts***

### **Admissions Forecast**

The admissions forecast is one of the key inputs into the population simulation model. It is based on historical admissions and produced using statistical time series models. The forecast also incorporates the judgment and experience of the Policy Advisory Committee and the Technical Advisory Committee. Due to the extensive changes resulting from the state budget reductions, this year's admissions forecast was adjusted by the Policy Advisory Committee. These adjustments are detailed below.

### **Adjustments to the Admissions Forecast**

This year the juvenile admissions forecast was numerically adjusted by the Policy Advisory Committee. The need for an adjustment was determined in response to significant budget cuts in DJJ community programs. DJJ and the Policy Advisory Committee believe that juvenile correctional center admissions will most likely increase relative to the trend that would have been anticipated before the program reductions.

The methods currently used to produce the juvenile admissions forecast are not capable of capturing and projecting the impact of these types of changes. Adjustments were made after careful consideration of analyses and recommendations produced by the Technical Advisory Committee in conjunction with the Department of Juvenile Justice. The adjustments can be summarized under three main categories: 1) adjustments due to funding reductions to community-based programs; 2) adjustments due to loss of funding for the Peninsula Marine Institute and the Norfolk Marine Institute 3) adjustments due to funding cuts to the Camp Kenbridge intermediate sanction boot camp program.

### **Adjustments Due to Funding Reductions to the Community-Based Programs**

For FY 2003, funding for the Virginia Juvenile Crime Control Act (VJCCCA) has been reduced by 51%. The Department estimates that these cuts have the potential to increase DJJ admissions by an additional 289 committed juveniles. This figure was derived by recognizing that in FY 2002 approximately 7,300 juveniles who were served by VJCCCA programs were eligible for commitment to juvenile correctional centers. Based on the characteristics of the VJCCCA program that they utilized, 567 of those 7,300 juveniles were deemed most likely to have been committed. Applying the 51% funding reduction to the 567 most likely to have been

committed implies that approximately 289 additional juveniles would have been committed to DJJ.

The Policy Advisory Committee approved the addition of a more conservative 25% of that 289. Approximately 72 more admissions were added to the first year of the admissions forecast.

### **Adjustments Due to Loss of Funding for the Peninsula Marine Institute and the Norfolk Marine Institute**

Together these two programs served 132 juveniles in FY 2001. Of those youths served by these programs, 104 were eligible for commitment to DJJ. Loss of state funding for the Peninsula Marine Institute and the Norfolk Marine Institute could lead to as many as 104 additional juvenile admissions. Again, the Policy Advisory Committee approved the adjustment of adding 25% of that value to the FY 2003 admissions forecast.

### **Adjustments Due to Funding Cuts to the Camp Kenbridge Intermediate Sanction Boot Camp Program**

Funding for the Camp Kenbridge Boot Camp Program has been reduced from 100 beds to 50 beds. Camp Kenbridge served approximately 300 juveniles each in FY 2001 and FY 2002. For FY 2003 DJJ estimates a maximum of 86 additional admissions resulting from this change<sup>9</sup>. The Policy Advisory Committee adjusted the admissions forecast by adding 25% of that value to the FY 2003 forecast.

The total adjustment in the first year of the forecast was  $.25*(289+104+86) = 120$  additional admissions. Similar adjustments were made to the admissions forecast for FY 2004 through 2008. No adjustments were made to any of the other variables that feed into producing the population forecast. Once the "revised" admissions stream was input into the model and a population forecast produced, there were no adjustments made to the resulting juvenile population forecast.

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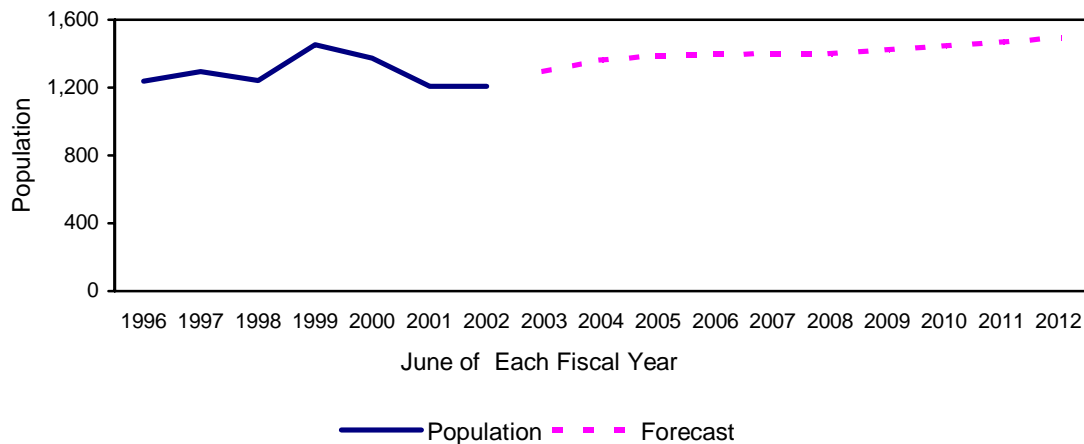
<sup>9</sup> Current boot camp clients will overlap the FY 2003 funding cut off. So, the full impact of losing the funding for the 50 beds will not be felt during the first year.

## Population Forecast

Figure 16 presents the June forecast for the juvenile Average Daily Population (ADP) over the next ten fiscal years. Table 7 provides additional highlights.

The June figures for the population were virtually unchanged from FY 2001 to FY 2002. The June forecast for FY 2003 is approximately 7% higher than the FY 2002 population.

**Figure 16: Historical and Projected State Responsible Juvenile Offender Population FY 1996-2012\***



\*June values are shown for each fiscal year.

**Table 7: Comparative Summary of Historical and Forecasted SR Juvenile Population**

	Largest Monthly ADP During the Year	Average Monthly ADP During the Fiscal Year	June ADP
<b>FY 2001</b>	<b>1366</b>	<b>1255</b>	<b>1206</b>
<b>FY 2002</b>	<b>1212</b>	<b>1190</b>	<b>1208</b>
<b>FY 2003 Forecast</b>	<b>1293</b>	<b>1216</b>	<b>1293</b>

The increase in the first year of the forecast, FY 2003, reflects to a large degree the impact of additional correctional center admissions resulting from various program reductions. Without those adjustments to the admissions stream the model would have forecasted a small average decline in the FY 2003 juvenile population. From FY 2004 to FY 2008 the population is forecasted to rise modestly. This rise is due partially to the increase in juvenile admissions resulting from the budget cuts. It also reflects several other influences:

- 1) the trend towards a higher proportion of determinately committed juveniles;
- 2) the trend towards a higher proportion of sex offenders;
- 3) the lower proportion of 3-6 month indeterminate sentences and the growing proportion of longer indeterminate categories.

Each of these influences is captured in the structure of the simulation model.

See *Table 8* for historical and forecasted state responsible juvenile offender admissions and population changes from FY 1995 through FY 2012.

**Table 8: State Responsible Juvenile Offender Admissions and Population Change**

<b>Fiscal Year</b>	<b>Total Admissions</b>	<b>Difference</b>	<b>Percentage Change</b>	<b>End of Fiscal Year Population</b>	<b>Difference</b>	<b>Percentage Change</b>
<b>Historical<sup>1</sup></b>						
1995	1,843			1,114		
1996	1,734	-109	-5.91%	1,236	122	10.95%
1997	1,701	-33	-1.90%	1,293	57	4.61%
1998	1,674	-27	-1.59%	1,243	-50	-3.87%
1999	1,594	-80	-4.78%	1,454	211	16.98%
2000	1,450	-144	-9.03%	1,373	-81	-5.57%
2001	1,241	-209	-14.40%	1,206	-167	-12.16%
2002	1,220	-21	-1.69%	1208	2	0.17%
<b>Projected<sup>2</sup></b>						
2003	1,312	92	7.54%	1,293	85	7.04%
2004	1,308	-4	-0.30%	1,361	68	5.26%
2005	1,308	0	0.00%	1,389	28	2.06%
2006	1,308	0	0.00%	1,396	7	0.50%
2007	1,308	0	0.00%	1,399	3	0.21%
2008	1,308	0	0.00%	1,400	1	0.07%
2009*	1,308	0	0.00%	1,423	23	1.62%
2010*	1,308	0	0.00%	1,446	23	1.62%
2011*	1,308	0	0.00%	1,469	23	1.62%
2012*	1,308	0	0.00%	1,493	24	1.62%
<b>Average Percentage Change Per Year</b>						
1995-2002			-5.61%			1.59%
2004-2008			0.00%			1.62%

<sup>1</sup>Data Source: Historical data was supplied by the Juvenile Tracking System. Total Admissions represent the sum for each FY. Population data represent June values for each FY.

<sup>2</sup>Projected forecast was developed by the Technical Advisory Committee for Offender Population Forecasting and approved by the Policy Advisory Committee for Offender Population Forecasting.

\*Figures for FY 2009 to FY 2012 are extrapolated using the average percentage change from FY 2004 to FY 2008.

## VII. Virginia's Juvenile Detention Home Population

### *Introduction*

This year marks the first in which the Secretary of Public Safety is presenting a forecast for the juvenile detention home population. Local government or multi-jurisdictional commissions operate most secure detention home programs. The programs provide safe and secure housing for youth accused of serious crimes. The Department of Juvenile Justice acts as the regulatory agency and also provides partial funding for construction and operations.

Historically, the vast majority of detention home capacity has been utilized for pre-dispositional detention. Juveniles are detained pending adjudication, disposition or placement. Post-dispositional utilization has typically represented less than 5% of detention home utilization but very recent evidence suggests that post-dispositional utilization may be increasing. Post-dispositional detention is an alternative to state commitment and will be used by the courts for lower level offenders. Post-dispositional confinement cannot exceed 180 days.

The methods, model and process used to produce the detention home population forecast parallels those used for other forecasts reported in this document (See Section I, Overview of the Virginia Forecasting Process). This year's forecast was generated using a time series model, and there were no numerical adjustments to the forecast.

The following *Table 9* provides a summary of key Virginia juvenile detention home statistics.

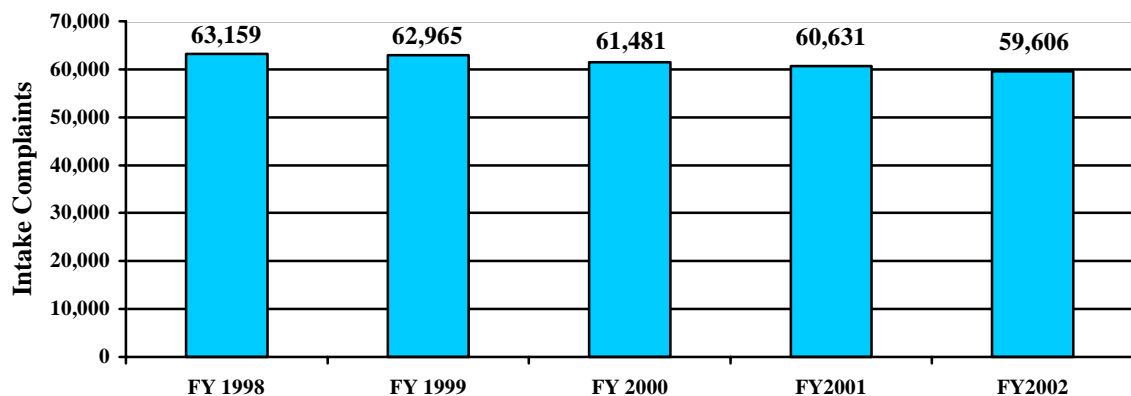
**Table 9: Juvenile Detention Home Statistics FY 2001 to FY 2002**

	<b>FY 2001</b>	<b>FY 2002</b>	<b>Percent Change</b>
<b>Number of Admissions to Secure Detention</b>	<b>21,021</b>	<b>21,241</b>	<b>1.0%</b>
<b>June Average Daily Population (ADP)</b>	<b>1,110</b>	<b>1,187</b>	<b>6.9%</b>
<b>Average Length of Stay (LOS) in Detention [days]</b>	<b>19</b>	<b>18</b>	<b>-5.3%</b>
<b>Median LOS in Detention [days]</b>	<b>10</b>	<b>10</b>	<b>0.0%</b>
<b>Percent of Juveniles Detained 3 Days or Less</b>	<b>29%</b>	<b>29%</b>	<b>0.0%</b>
<b>Percent of Juveniles Detained 21 Days or Less</b>	<b>73%</b>	<b>74%</b>	<b>1.0%</b>
<b>Percent of Juveniles Detained 51 Days or Less</b>	<b>92%</b>	<b>93%</b>	<b>1.0%</b>
<b>Total Detention Home Capacity</b>	<b>1,078</b>	<b>1,170</b>	<b>8.5%</b>
<b>Pre-Dispositional Capacity</b>	<b>974</b>	<b>1,033</b>	<b>6.1%</b>
<b>Post-Dispositional Capacity</b>	<b>104</b>	<b>137</b>	<b>31.7%</b>
<b>Detention Home Fiscal Year Utilization Rate</b>	<b>101%</b>	<b>95%</b>	<b>-6.0%</b>
<b>Percentage of Post-Dispositional Detention Beds</b>	<b>10%</b>	<b>12%</b>	<b>2.0%</b>

## Trends Impacting the Detention Population

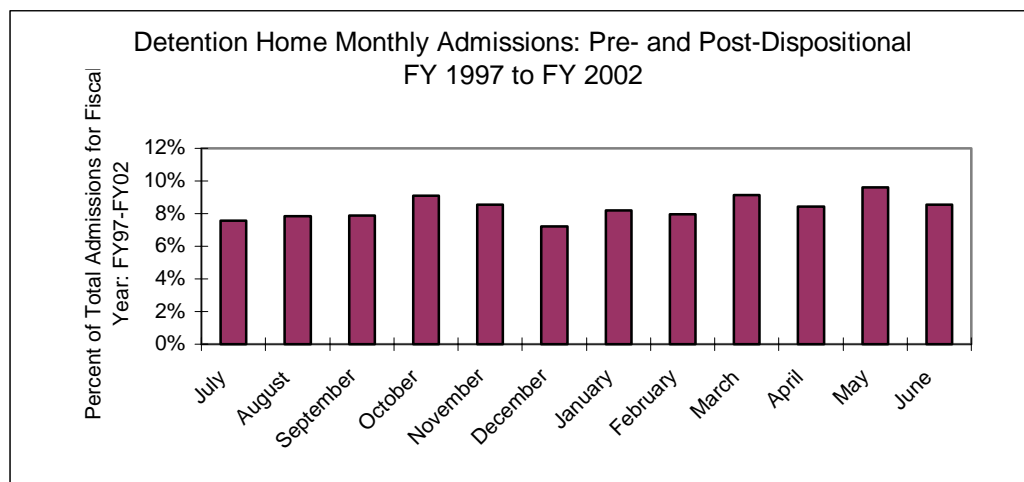
- For an intake complaint to be eligible for a Detention Home placement, it must be based on a felony, class1 misdemeanor, or the violation of either probation or parole (see *Figure 17*). From FY 1998 to FY 2002, detention eligible intake complaints have declined by about 1% per year.

**Figure 17: Detention Eligible Juvenile Intake Complaints**



- Detention admissions (see *Figure 18*) are very seasonal. Peaks generally occur during the fall and spring. Troughs generally occur during summer and winter. The evidence refutes the common belief that detention homes are busier when school is out.

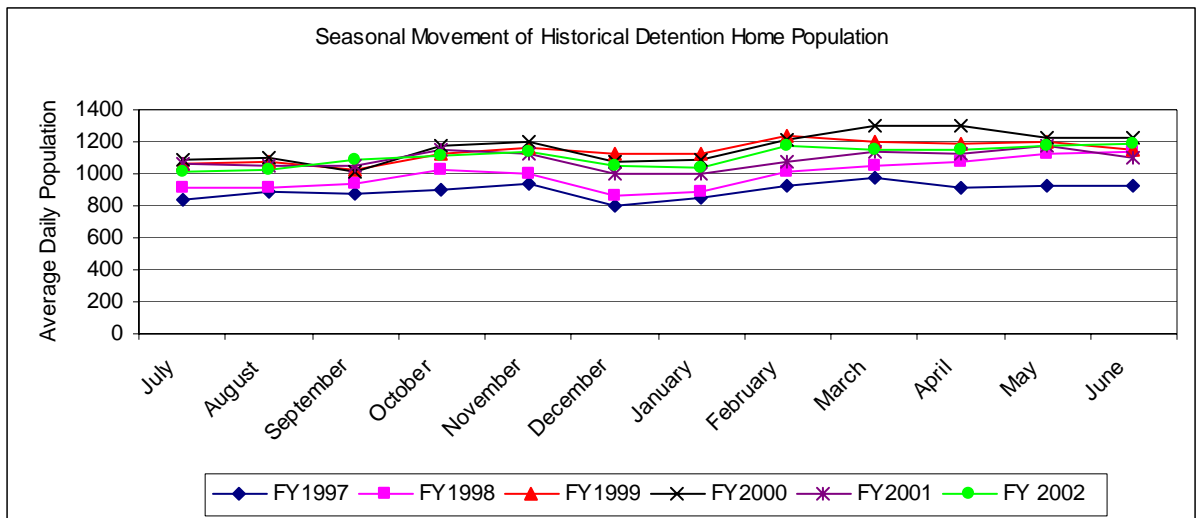
**Figure 18: Detention Home Monthly Admissions by Pre- and Post-Dispositional**



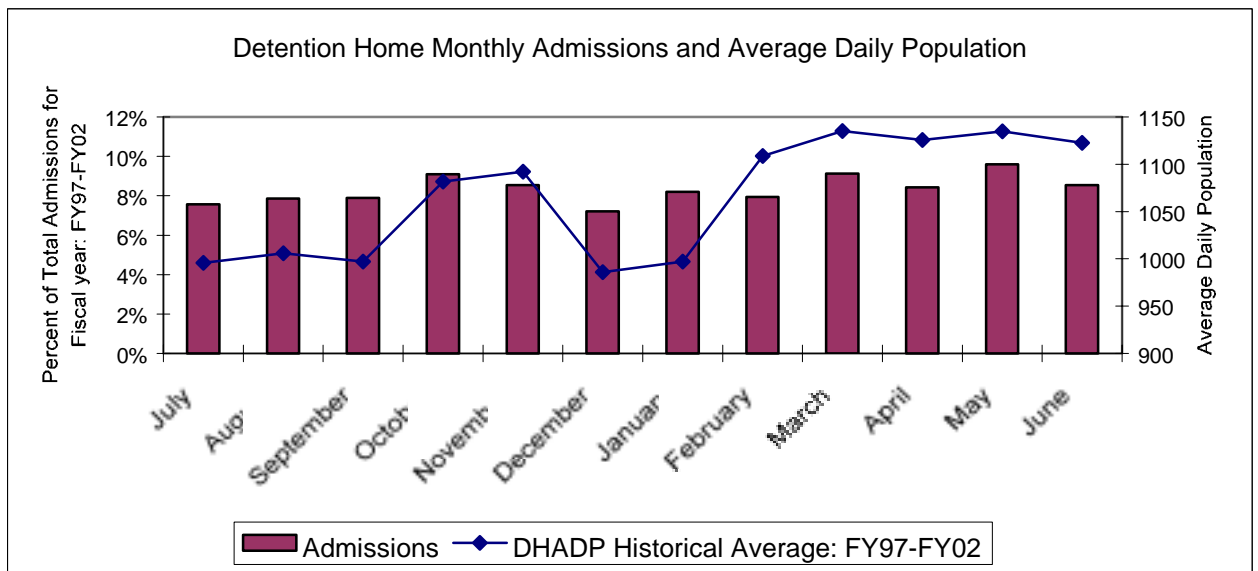
- The average length of stay in FY 2002 was 19 days. More than 90% of detainees are in detention for 51 days or less. Statutory requirements are responsible for much of detention home length of stay characteristics. For example, detainees are required to appear before a judge within 72 hours. Also, if an adjudicatory or transfer hearing is not completed within 21 days, the juvenile must be released. Similarly, if a disposition hearing is not completed within 30 days after adjudication, the juvenile must be released. Extensions may be granted for a reasonable period of time if good cause can be shown.

- The seasonal admissions pattern and the short lengths of stay give rise to a prominent seasonal pattern in the population movement. *Figure 19* shows the recurring seasonal pattern in the population movement for FY 1997 to FY 2002. In *Figure 20* the line graph is a monthly average of the detention home population for FY 1997 to 2002. It is plotted against a bar chart which shows the percentage of annual detention home admissions that arrive in each month. Here, it is easy to see the close link between the seasonal movement in the population and the seasonal pattern in admissions.

**Figure 19: Seasonal Movement of Historical Detention Home Population**



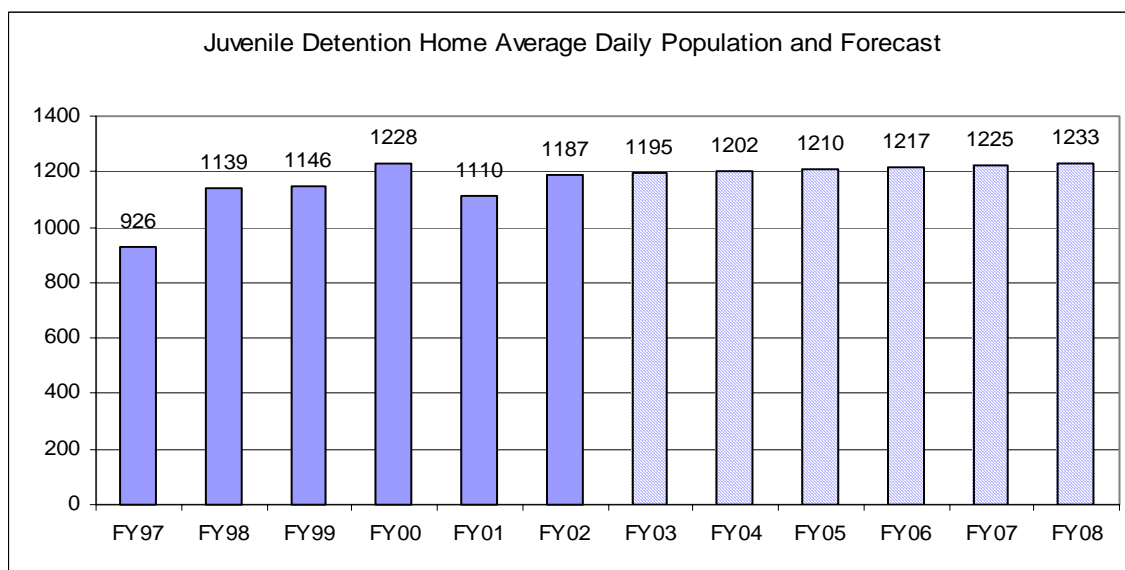
**Figure 20: Detention Home Monthly Admissions and Average Daily Population**



## The Detention Home Forecast

Figure 21 and Table 10 show the forecast for the June detention home average daily population. The detention home population is forecasted to grow at a very modest rate of less than 1% per year from FY 2003 to FY 2008. This rather modest projected growth can be explained as the result of a rather stable and modest projection for intake complaints. Detainable juvenile intake complaints are not formally forecasted, but from FY 1998 to FY 2002 they have declined, on average, by around 1% per year (see previous Section VII, subsection *Trends Impacting the Detention Home Population*). There is no marked change that is anticipated for that trend.

**Figure 21: Juvenile Detention Home Average Daily Population and Forecast**



**Table 10: Juvenile Detention Home Maximum, Average and June Monthly ADP**

	Maximum Monthly ADP	Average Monthly ADP	June ADP
FY 2001	1,173	1,091	1,110
FY 2002	1,187	1,106	1,187
FY 2003 Forecast	1,195	1,152	1,195

### ***Factors that May Influence the Accuracy of the Detention Home Forecast***

#### **Intake Complaints**

It has been noted that in recent fiscal years there has been a small but quantifiable decrease in the number of delinquency intake complaints. Assuming that the proportion of detention orders filed to delinquent intake complaints remains fairly stable, the issue becomes whether the recent trend in declining intake complaints will continue.

## Length of Stay (LOS)

LOS is an important determinant of detention population. The courts, by statute, must adjudicate and dispose of detention cases in a timely fashion. There is no indication that this aspect of the juvenile justice process will be modified.

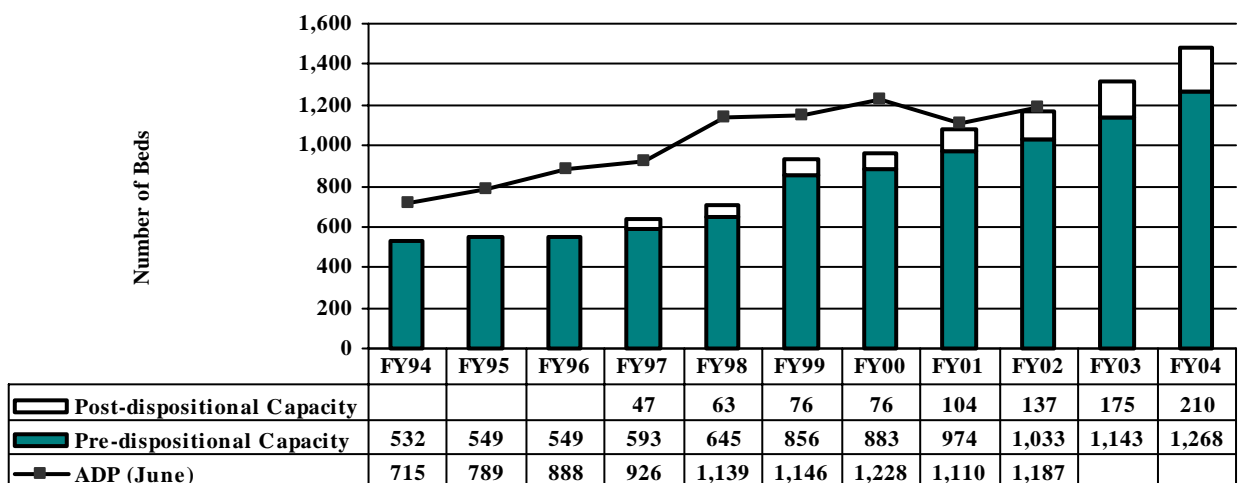
## Detention Assessment Instrument (DAI)

The second enactment of Chapter 978 of the *Acts of Assembly of 2000* mandated the creation and implementation of an objective instrument to improve consistency in detention decisions and reduce the number of inappropriate detention admissions. Court Service Units will begin to use the DAI in the fall of 2002. A pilot study indicated that the use of the DAI will probably not have an immediate influence on the number of admissions or detention home ADP, but the exact impact of the DAI is still unclear.

## Detention Home Capacity

The possible influence of available capacity is also a factor to consider. From FY 1994 to FY 2002 detention home capacity has increased from 532 beds to 1,170 beds. Current plans call for continued expansion to 1,478 beds by the end of FY 2004. *Figure 22* below provides detail on past and planned capacity changes.

**Figure 22: Detention Home Capacity Changes FY 1994 to FY 2004**



### Approved Expansion as of 5/21/2002

FY2000	FY2001	FY2002	FY2003	FY2004
Roanoke 21 to 48	Rappahannock 21 to 80 James River* 60	Highlands 20 to 30 Piedmont* 20 W.W. Moore 30 to 60 Roanoke 48 to 81	Blue Ridge* 40 Chesterfield 33 to 90 Pr. William 40 to 72 Shenandoah 32 to 50	Virginia Beach* 90 Newport News 40 to 110

\*Denotes a new facility

## Substance Abuse Reduction Effort (SABRE)

The elimination of SABRE funds, which were used to provide treatment services for juveniles at-risk for substance abuse problems, is not expected to have a short-term effect on detention home admissions. Over the next few years, however, there may be more of an impact on detention home admissions as juveniles with these problems may enter the justice system.

## **VIII. Issues for Future Consideration**

The Policy Advisory Committee identified various issues for future consideration in offender forecasting work, and directed the Technical Advisory Committee to examine these issues during the CY 2003 forecasting season.

### **Information on Probation Violators**

The Department of Corrections, with assistance from the Virginia Sentencing Commission, will provide data on the number of probation violators, whether they were revoked for a technical violation or new crime, and the return ratio of the violators.

### **Data Lag Time**

The Technical Advisory Committee will continue work already done to examine lags in data reporting that affect forecasting. The Committee will provide the Secretary of Public Safety with recommendations for reducing data lag time in the forecasting process.

### **Impact of the Risk Assessment Instrument**

The Virginia Sentencing Commission will assess the impact of statewide implementation of the Risk Assessment Instrument for felons and will work with the Department of Corrections to assess the impact on the state responsible forecast. The Department of Criminal Justice Services will work with community corrections groups to assess the impact of their instrument on misdemeanants and the local responsible population.

### **Information on Local Jail Offender Subpopulations**

The current forecast was developed using data on the total jail offender population. However, forecasting may be improved if the local responsible population is categorized by type of crime (violent, nonviolent, drugs). The Department of Criminal Justice Services and Compensation Board will work on developing a local responsible forecast by crime type. Additionally, it may be necessary to refine and construct LIDS so that the case-based data needed to build and sustain a jail simulation model will be readily available for forecasting future LR populations.

### **Legislative Impacts**

The Department of Planning and Budget will report on any changes in legislation or budget issues that may impact adult or juvenile populations and community or prison programs.

### **Impact of Post-Dispositional Detention on Juvenile Offender Population Capacity**

Statewide post-dispositional detention (post-d) capacity continues to increase as local and regional detention centers complete their approved renovation and expansion. Currently, there are 137 beds available throughout the state for juveniles serving up to 180 days in detention pursuant to §16.1-284.1 of the *Code of Virginia*. The Department of Juvenile Justice anticipates that post-dispositional capacity will increase to 210 beds by FY 2004. The availability of these dedicated beds allows judges the option to sentence low-level juvenile offenders to be held locally, thereby potentially decreasing admissions to state juvenile correctional centers.

Funding issues at the local level may offset this trend just mentioned. As localities establish their funding priorities in a time of shrinking revenues the additional costs associated with operating post-dispositional detention space will become an issue. DJJ provides partial funding for construction and operational costs of detention homes, but juveniles placed in post-dispositional detention require a host of services that are not normally given to the shorter-term pre-dispositional placements. Those additional variable costs are borne by the locality. DJJ will monitor and report on post-dispositional detention capacity.

### **Changes in Law**

Recent changes in the law affect eligibility criteria for post-dispositional placement. Effective July 2002, any eligible juvenile shall be sentenced with a suspended commitment and sent to secure detention in lieu of being sent to a juvenile correctional center.

Upon failure in the post-dispositional program the suspended commitment must be imposed – that is, the juvenile will be committed to a juvenile correctional center.

Finally, effective July 2002, juveniles released from the custody of the Department of Juvenile Justice within the last eighteen months are ineligible for post-dispositional detention.

The Technical Advisory Committee will monitor these changes to assess their impact on the juvenile correctional center population.

### **Utilization of Non-Secure Residential Programs and Post-Dispositional Detention Beds**

The Department of Juvenile Justice will report on the utilization of non-secure residential programs (i.e., group homes). They will also report on pre- and post-dispositional lengths of stay and track the utilization of post-dispositional detention beds.

### **Monitor the Effect of Less Funding for Alternative Juvenile Programs**

The Department of Juvenile Justice will track and estimate the number of juveniles committed to the state that would otherwise likely have been placed in alternative programs that lost funding for FY 2003 and FY 2004.

### **Arrest Data**

The Department of Criminal Justice Services will review and recommend whether the IBR (Incident Based Report) or the CCRE (Central Criminal Records Exchange) arrest data should be used for arrest trend tracking.

### **Forecast Accuracy**

The Technical Advisory Committee will submit quarterly accuracy reports to the Secretary of Public Safety. The Department of Corrections will report on the state responsible offender population forecast, the Department of Criminal Justice Services on the local responsible offender population forecast, and the Department of Juvenile Justice on the juvenile offender population forecast. The Department of Planning and Budget will collect the quarterly reports and submit an aggregate report to the Secretary of Public Safety.

The chair of the Policy Advisory Committee directed that quarterly reports be made to the Office of the Secretary of Public Safety on progress toward addressing the above issues.

## IX. Comparison of Annual Forecasts Prepared in 2001 and 2002

**Table 11: State Responsible Offender Population Forecasts 2001 and 2002**

Fiscal Year	2002 Forecast	2001 Forecast	Difference
2002		33,743	
2003	36,310	34,046	2,264
2004	37,070	34,203	2,867
2005	37,926	34,512	3,414
2006	38,864	34,702	4,162
2007	39,960	35,049	4,911
2008	40,990	35,399	5,591
2009	42,014	35,753	6,261
2010	43,065	36,111	6,954
2011	44,141	36,472	7,669
2012	45,245		

**Table 12: Local Responsible Offender Population Forecasts 2001 and 2002**

Fiscal Year	2002 Forecast	2001 Forecast	Difference
2002		16,355	
2003	17,093	17,555	-462
2004	17,648	18,432	-784
2005	18,390	19,246	-856
2006	19,164	20,238	-1074
2007	19,904	21,240	-1336
2008	20,655	22,280	-1625
2009	21,463	23,372	-1,909
2010	22,302	24,517	-2,215
2011	23,174	25,719	-2,545
2012	24,080		

**Table 13: Juvenile Offender Population Forecasts 2001 and 2002**

Fiscal Year	2002 Forecast	2001 Forecast	Difference
2002		1,257	
2003	1,293	1,303	-10
2004	1,361	1,299	62
2005	1,389	1,300	89
2006	1,396	1,299	97
2007	1,399	1,310	89
2008	1,400	1,321	79
2009	1,423	1,332	91
2010	1,446	1,343	103
2011	1,469	1,354	115
2012	1,493		

## X. Historical Forecasts Accuracy for June 2002

Tables 14, 15, and 16 show current and historical forecast accuracy of June 2002 projections for prisons, jails, and juvenile confinement populations, respectively. Long-term (2 or more years) forecasts are inherently less accurate than short-term projections as is evident in these tables. The one-year projection of the prison population for June 2002 was lower than actual populations.<sup>10</sup> However, one-year projections of local responsible annual average of ADP (Average Daily Population) and juvenile June populations were higher than actual populations for 2002. Factors that diminished the accuracy are discussed below.

**Table 14: State Responsible Offender Population Historical Forecast Accuracy**

Year Forecast Prepared	Years Projected	Projected Population for June 2002	Actual June 2002 Population	Accuracy
2001	1 year	33,743	34,918	-3.4%
2000	2 years	32,589	34,918	-6.7%
1999	3 years	32,791	34,918	-6.1%
1998	4 years	32,862	34,918	-5.9%

**Table 15: Local Responsible Jail Offender Population Historical Forecast Accuracy**

Year Forecast Prepared	Years Projected	Projected Population for June 2002	Actual annual average 2002 Population	Accuracy
2001	1 year	16,355	16,214	0.9%
2000	2 years	16,063	16,214	-0.9%
1999	3 years	16,787	16,214	3.5%
1998	4 Years	13,823	16,214	-14.7%

**Table 16: State Responsible Juvenile Offender Population Historical Forecast Accuracy**

Year Forecast Prepared	Years Projected	Projected Population for June 2002	Actual June 2002 Population	Accuracy
2001	1 year	1,257	1,208	4.03%
2000	2 years	1,435	1,208	18.79%
1999	3 years	1,454	1,208	20.36%
1998	4 years	1,343	1,208	11.18%

<sup>10</sup> Accuracy was calculated as follows:  $([\text{projected population} - \text{actual population}] / \text{actual population}) * 100$

### ***State Responsible Prison Offender Forecast - Factors that Impacted Accuracy***

The state responsible prison population was consistently higher than the official forecast by an average of 442 offenders per month or 1.3% during FY 2002. The main factor that has contributed to this variation is higher than expected new court admissions (see *Table 17*). The official state responsible population forecast is based on the official admissions forecast. The admissions data is lagged by 6 months due to processing of sentencing data from the courts and time computations on the data by DOC. Actual CY 2001 admissions were approximately 12% higher than expected. Additional factors are increases in serving time for new law offenders and the consequent stacking of offenders in the SR population.

**Table 17: CY 2001 Quarterly State Responsible (SR) New Court Admissions**

	<b>Official Monthly SR New Commitment Forecast</b>	<b>Actual SR New Commitments</b>	<b>Difference</b>	<b>Percent</b>
1 <sup>st</sup> Quarter	2,236	2,398	-162	-7.2%
2 <sup>nd</sup> Quarter	2,235	2,609	-374	-16.7%
3 <sup>rd</sup> Quarter	2,258	2,539	-281	-12.4%
4 <sup>th</sup> Quarter	2,202	2,449	-247	-11.2%
<b>Total</b>	8,931	9,995	-1,064	-11.9%

### ***Local Responsible Jail Offender Forecast - Factors that Impacted Accuracy***

The actual local responsible (LR) jail population was consistently lower than the official forecast by an average difference of 410 offenders per month (2.6%) during FY 2002. The difference between the actual population and the forecast decreased each quarter, from 690 offenders (first quarter FY 2002) to 152 offenders (fourth quarter FY 2002). Factors that may have contributed to actual population being slightly lower than forecast population include the following:

First, the current LR forecast is an aggregate number based on four different groups of jail offenders: unsentenced awaiting trial, sentenced awaiting trial, local responsible felons and misdemeanants. These categories of offenders may or may not reflect changes in crime trends. Data based on offense categories (i.e., violent, nonviolent, and drugs) may better reflect changes in crime trends and jail offenders.

Second, although the local responsible population increased annually since FY 1998, programs that provide alternatives to incarceration may have moderated this increase. For example, jail diversions due to local community corrections and pre-trial services programs increased by 46% from FY 1998 to FY 2001. However current and future budget cuts may reduce the availability of this alternative sanction, mitigating the downward effect on jail population.

Third, the actual number of local responsible jail offenders being held in accordance with the Bail Bond Reform statute during FY 2002 could not be determined, due to the fact that LIDS was not designed to support this type of analysis. Tougher sentences under these statutes are expected to send some formerly jailable offenders to prison, which would reduce the jail

population. However, the more stringent bail/bond requirement also may result in an increase in jailable offenders.

Finally, the annual jail population forecast is developed using time series techniques (ARIMA and Exponential Smoothing). While time series techniques are powerful statistical tools for projecting future values of jail population based on past population values, time series techniques do not imitate (simulate) the overall dynamics of the state's complex jail system. To accurately forecast jail populations and to simulate the complex effects of proposed changes in legislation/sentencing, arrest trends, demographic trends, the policy and economic changes on jail population, it may be necessary to refine and construct LIDS so that the case-based data needed to build and sustain a jail simulation model will be readily available for forecasting future LR population.

### ***State Responsible Juvenile Offender Forecast - Factors that Impacted Accuracy***

On average during FY 2002 the monthly state responsible juvenile population forecast was less than 1% higher than the actual. The largest single month variance occurred in June 2002. The June forecast was 4% higher than the actual. The variance can largely be attributed to releases which were higher than forecasted (and assumed in the simulation model) and admissions that were lower than forecasted.

For FY 2002 the simulation model assumed that releases would total 1,149; however, the actual number of releases was 1,211 or a difference of -62. Total admissions for FY 2002 were forecasted to be 1,232 but the actual number was 1,220, a difference of 12. *Table 18* and *Table 19* provide quarterly summaries of the activity among these variables for the FY 2002.

**Table 18: Quarterly Summary of Juvenile Forecasted and Actual Releases FY 2002**

	<b>Forecasted Releases</b>	<b>Actual Releases</b>	<b>Variance</b>
<b>1<sup>st</sup> Quarter</b>	<b>341</b>	<b>304</b>	<b>37</b>
<b>2<sup>nd</sup> Quarter</b>	<b>310</b>	<b>335</b>	<b>-25</b>
<b>3<sup>rd</sup> Quarter</b>	<b>263</b>	<b>270</b>	<b>-7</b>
<b>4<sup>th</sup> Quarter</b>	<b>234</b>	<b>302</b>	<b>-68</b>
<b>Total</b>	<b>1,149</b>	<b>1,211</b>	<b>-62</b>

**Table 19: Quarterly Summary of Juvenile Forecasted and Actual Admissions FY 2002**

	<b>Forecasted Admissions</b>	<b>Actual Admissions</b>	<b>Variance</b>
<b>1<sup>st</sup> Quarter</b>	<b>305</b>	<b>274</b>	<b>31</b>
<b>2<sup>nd</sup> Quarter</b>	<b>312</b>	<b>332</b>	<b>-20</b>
<b>3<sup>rd</sup> Quarter</b>	<b>308</b>	<b>290</b>	<b>18</b>
<b>4<sup>th</sup> Quarter</b>	<b>307</b>	<b>324</b>	<b>-17</b>
<b>Total</b>	<b>1,232</b>	<b>1,220</b>	<b>12</b>

## **XI. Appendices**

### **Appendix A: Correctional Terminology**

**Average Daily Population** - daily population calculated by dividing the monthly population total by the number of days in the month.

**Awaiting with Sentence** - convicted local responsible offenders housed in local jails who have other charges pending.

**Baseline Admissions** - the number of new commitments exclusive of parole violators and any adjustments decided upon by the Policy Advisory Committee.

**CCRE** – Central Criminal Records Exchange is a finger print identification based system to track offenders who are arrested in Virginia.

**Confined/Stock Population** - refers to state responsible (SR) offenders currently incarcerated in DOC facilities and local jails.

**Correctional Center** - refers to a secure facility operated by, or under contract with, the Department of Juvenile Justice to house and treat persons committed to the Department.

**GCA** (Good Time Conduct Allowance) - old law (offense date prior to January 1, 1995) sentenced offenders who are eligible for parole under good time conduct allowance.

**IBR** – Incident Based Reporting System is the newest arrest reporting system used by Virginia localities and has replaced the original UCR or Uniform Crime Reporting System.

**Last Sentence Date** - in the new commitment forecast, the date of final sentencing is used in establishing the point of admission.

**Local Responsible Felons** - convicted felons who serve their sentence in a local jail. The following conditions for local responsibility apply:

As of July 1, 1997, a new law offender (offense date on or after January 1, 1995) with a sentence of less than one year is local responsible and an old law offender (offense date prior to 1/1/95) with a sentence less than or equal to two years is considered local responsible. As of September 1998, all felons with sentences worded as "12 months" are local responsible.

**Local Responsible Population (LR)** - individuals incarcerated in jails and counted as being in one of the following categories: unsentenced awaiting trial, awaiting with sentence, all sentenced misdemeanants, and local responsible felons.

**New Commitment** - an offender who is received from the community after committing a crime and sentenced to serve a state responsible (SR) sentence under the jurisdiction of the Virginia Department of Corrections.

**Offenses** - categorized as violent (capital murder, homicide, manslaughter, abduction, rape, robbery, assault and weapons), nonviolent (arson, burglary, fraud, larceny/fraud, conspiracy, less serious sex offenses, DUI, habitual traffic offenses) or drugs (sales or possession).

**Population Survey of Local Correctional Facilities** - see Tuesday Report.

**Post-Disposition** - refers to a secure juvenile detention facility operated by localities or commissions and housing sentenced juveniles for a period up to six months.

**Sentenced Misdemeanants** - offenders convicted and sentenced on only misdemeanors and who do not have other charges pending.

**State Responsible Population (SR)** - state responsible felon offenders for whom the Department of Corrections has received the complete and final court order. The following conditions for state responsibility apply:

As of July 1, 1997, a new law offender (offense date on or after 1/1/95) with a net felon sentence of greater than or equal to one year is state responsible and an old law offender (offense date prior to 1/1/95) with a sentence greater than two years is considered state responsible.

**Tuesday Report** - a report that was maintained by the Department of Corrections from the late 1970's to September 1998 and as of October 1998 was transferred to and is now maintained by the Compensation Board. It includes information regarding offender populations of the local jail correctional system.

**Unsentenced Awaiting Trial** - individuals who are incarcerated but have not been convicted and/or sentenced, nor is the individual currently serving time on other charges.

#### **Probation/Parole Definitions:**

**Discretionary Parole** - a type of supervised release granted by the Parole Board subsequent to a parole hearing. Only offenders with parole eligible sentences can be released on discretionary parole.

**Mandatory Parole** - a type of supervised release to the community for old law sentenced offenders whose crime(s) date was/were before January 1, 1995. Mandatory parole cases are released within four to six months of their final discharge date.

**Recidivist** - offender with more than one prior incarceration. In general, the definition of a recidivist or a repeat offender can be broadly defined based on various indicators such as re-arrest, re-conviction or re-incarceration.

## **Appendix B: Community Programs**

### ***Comprehensive Community Corrections Act for Local Responsible Offenders (CCCA)***

**§ 53.1-180-185.3** - enables any city, county or combination thereof to develop, establish and maintain community-based corrections programs to provide the judicial system with sentencing alternatives for certain misdemeanants or persons convicted of nonviolent felonies, as defined in § 19.2-316.1 and sentenced pursuant to § 19.2-303.3, for whom the court may impose a jail sentence and who may require less than institutional custody.

***Boot Camp (Shock Probation)*** - condition of probation in lieu of incarceration; 90-day voluntary military style residential program geared for offenders who are 24 years old or younger with no prior felony incarceration.

***Day Reporting Center*** - non-residential community program geared for probationers/parolees with a history of substance abuse who require maximum daily supervision, treatment and services.

***Detention Center*** - 4 to 6 month military style residential program geared for nonviolent felons who require more supervision than the diversion center and whose age and physical condition disqualifies the offender from the boot camp program; condition of probation in lieu of incarceration.

***Diversion Center*** - 4 to 6 month residential work program geared for nonviolent felons focusing on job readiness with employment in the private sector; geared for offenders otherwise sentenced to incarceration who require more than intensive supervision or whose sentence would otherwise be revoked after a finding that the offender has violated conditions of probation.

***Parole*** - upon release from prison, offenders are supervised in the community either as discretionary or mandatory parole releases.

***Pretrial Services Act (PSA) § 19.2-152.2-7*** - the Court may use information obtained from a pretrial investigation to assist in bail decisions. Defendants are supervised and accountable to special conditions imposed by the Court pending trial outcome.

***Probation*** - professional supervision of the offender in the community under conditions of probation and special conditions set by the court. Probation is considered a less restrictive form of punishment than incarceration in prison or jail.

***Virginia Juvenile Community Crime Control Act (VJCCCA)***- replaced the Juvenile Non-Secure Block Grant in January 1996.

## Appendix C: Forecasting Terminology

**ARIMA** - a statistical forecasting technique that analyzes time series data and produces future values based on known historical values. ARIMA captures the historic correlations of the data and extrapolates them forward. Formal name for ARIMA is "**A**uto**r**egressive **I**ntegrated **M**oving **A**verage."

**Box-Jenkins** - the same as ARIMA.

**Exponential Smoothing** - a statistical forecasting technique that analyzes time series data and produces future values based on known historical values. Exponential Smoothing methods identify trend and seasonality components, and extrapolate them forward.

**Simulation Model** - an analytical tool designed to mimic the flow of offenders through the correctional system by allowing the entry of offender profile information relative to sentencing, length of stay, earned credits and parole grant rates. The model then generates hypothetical cases and traces the progress of each of these cases along the established flows and through each status change until they exit from the system.

**Time Series Data** - a distribution of values based on a regular interval (day, month, quarter, year, etc.).

## Appendix D: Policy Advisory Committee Members, FY 2003 Forecast

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Supreme Court of Virginia

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Office of the Secretary of Public Safety

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Superintendent  
Virginia State Police

Sheriff George M. McMillan  
Roanoke City Sheriff's Office

Chief Dennis A. Mook  
Newport News Police Department

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Executive Director  
Public Defender Commission

James S. Roberts  
Deputy Secretary  
Secretary of Administration

The Honorable Richard S. Sanborn  
Chief Magistrate  
Thirty-first Judicial District

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Merrimac Detention Center

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## Appendix E: Technical Advisory Committee Members, FY 2003 Forecast

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